

An Evidence Base for Sports Facilities in London – the basis for Strategic Sports Facilities Planning Across London

**(Commissioned by the GLA and applying Sport
England's Facilities Planning Model)**

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Contents

	Page Number
Introduction	3
Context for the needs and evidence assessment	5
Rationale for developing the needs and evidence base	6
2021 Projected Population and the Demand and Supply for the Three Sports Facility Types	8
Summary of key findings	9
Recommendations	16

Appendices

Appendix 1 - London wide swimming pools map

Appendix 2 - London wide sports halls map

Appendix 3 - London wide artificial grass pitches map

Appendix 4 – List of which London boroughs appear in which GLA Planning sub region

Appendix 5 – How the study was undertaken and the Needs and Evidence Reports compiled

Introduction

1. The Greater London Authority (GLA) London Plan team and the GLA Sports Unit are seeking to update information on the provision of sports halls, indoor swimming pools and artificial grass pitches to inform a strategic assessment of sports facilities in London. This work will underpin evidence gathering to support Policy 3.20 Sports Facilities in the consultation draft Replacement London Plan at the Examination in Public (EiP) to be held June to October 2010.
2. The work will also assist the GLA in 'encouraging all authorities that have yet to undertake a needs and evidence base approach to planning for community sport to do so' – which is a stated aim of the Mayor's "*A Sporting Future for London*" document (April 2009).
3. This report sets out the work undertaken by the GLA and Sport England in partnership in meeting the requirement of the GLA by developing a comprehensive needs and evidence base for these major community sports facilities right across London. It provides the foundations for the sports facilities strategy and development planning work – at all levels across London (London wide, sub regional and borough level).
4. The objectives for the development of the evidence base are:
 - To assist the GLA in providing a strategic assessment of the current level of provision for the principle community sports facilities of sports halls, indoor swimming pools and artificial grass pitches. This current level provision analysis will help provide encouragement together with a baseline for all local authorities to undertake a needs and evidence based approach to planning for community facilities within their areas and at the sub regional level. As referenced above, this approach is in line with the recommendations of the Mayor's Legacy Plan for Sport – 'A Sporting Future for London' which includes a priority to initiate a sports facility strategy for London, and will inform the work of the Mayor's London Plan.
 - To match up the profile of sports participation across London, through using information from the Active People Survey, with the sports facility requirements as determined by Sport England's Facility Planning Model. These strategic planning tools provide the foundation information to encourage facility provision, whether it is by new investment or consolidation of existing sports facilities, to be in the right place and at the right scale to meet the current and future needs of community sports participation.
5. This report
 - sets out the context for the needs and evidence work undertaken

- the rationale for the needs and evidence base
- describes how the work was undertaken and the reports which have been produced
- details the main findings and
- sets out recommendations as to how the needs and evidence base can be taken forward in strategic planning and in the investment in facilities and consolidation of existing sports facilities.

Context for the Needs and Evidence Assessment

6. The evidence base is forward looking– it advances the commitment in ‘A Sporting Future for London’, to initiate a facility strategy for London and the Mayor’s encouragement to all local authorities that have yet to undertake a needs and evidence based approach to planning for community sport to do so by the end of 2012.
7. The work undertaken does provide that core evidence base right across London looking within and across every local authority. It projects the demand for sports facilities up to 2021 based on the GLA projected changes in the London population between 2010 and 2021 and the impact these changes have on sport participation in and across every borough.
8. It projects what will be the likely SUPPLY of sports facilities, as all 33 London boroughs have provided information on the known changes to their sports facilities stock up to 2013. This is the furthest date ahead which provides for known and committed changes in sports facilities provision.
9. This is all brought together in a comparative supply and demand evidence base which can be used to underpin the development of the facilities strategy at all levels:
 - a **London wide** strategic planning level to provide the London wide strategic overview on facility requirements for sports halls, swimming pools and artificial grass pitches right across London. A consistent method for comparing supply and demand has been applied across London
 - across the **five GLA** sub regions of London to develop planning guidance on sports facility needs focusing on the key areas where facilities are most needed right across the local authorities in each sub region – so a strategic overview and directing provision changes to where it is most needed and which will have most impact in terms of sports participation
 - within the **33 individual London boroughs** to provide a detailed comprehensive evidence base for local sports facility strategic planning - a borough wide assessment - determining the scale of sports facilities required and identifying the priority locations where demand is greatest.
10. The needs and evidence base works at any geographical scale and provides consistent analysis at all levels. The difference is in the application of the findings and its refinement – from strategic overview right across London to detailed site specific facility options within a local area for community sport.

Further Rationale for Developing the Needs and Evidence Base

11. The three sports facility types – (swimming pools, sports halls and artificial grass pitches) were selected for this strategic planning study because they are the three facility types which are the most important in providing for community sport and community sports participation.
12. In addition, they are the three most important sports facilities in terms of local authority investment in the sporting infrastructure; it is where they invest most financial resources (both capital and revenue).
13. Local authorities are the single biggest investor in the provision of swimming pools, both in the capital costs of providing them and meeting the whole life costs of maintaining them. Swimming pools represent the single biggest investment made by some local authorities in sports facilities provision. Across London there are some 273 swimming pool sites and within these sites some 385 individual swimming pools. This scale of provision represents very significant investment by local authorities and increasingly by the commercial sector in swimming pool provision and operation.
14. The average age of public swimming pools in London is around 23 years and as the stock ages it will be very important to direct investment to where it is most needed, either in maintaining and refurbishing the existing stock or consolidation to allow investment to be directed to where it is most needed to reflect the changing population profile of London.
15. Sports halls are multi purpose buildings catering for around 20 individual sports. Across London there are 436 sports hall sites and within these sites there are 603 individual sports halls. All but a handful of these sports halls are owned, provided and managed either directly or through other management arrangements by local authorities or local education organisations.
16. It is recognised that the current financial climate is likely to affect the availability of significant capital investment for new sports facilities. It is therefore imperative that all organisations focus on ensuring a maximum return on the investment that is available (whether it is capital funding for new build or refurbishments or revenue funding) for the benefit of community sport.
17. Taking into account all these considerations, it is essential that local authorities strategically plan for the future provision of these core sports facilities. To ensure that the right facilities are provided at the right location and at the right scale to meet sporting, lifestyle and educational objectives now and in the future.
18. The GLA wishes to use the outputs from the strategic planning study to inform the strategic and development planning process for sports facility

2021 Projected Population and the Demand and Supply for the Three Sports Facility Types

19. Before reporting the main findings it is important to set the context of the changes in the London population between 2010 and 2021 and the impact this has particularly on sports halls and artificial grass pitches.
20. The GLA population projection is for the London wide total population to increase from 7,737,892 people in 2010 to 8,346, 806 by 2021. This is an increase of 608,914 people. In scale of increase this represents two new boroughs each being the size of Enfield.
21. The knock on impact on this population increase is significant in terms of the projected increase in demand for sports halls. It is estimated by Sport England, based on the GLA population projections, that the total demand for sports halls is projected to increase from 380,543 visits in the weekly peak period in 2010 to 402,759 visits in the same weekly peak period in 2021. This is a WEEKLY peak period increase of 22,216 visits.
22. Based on the information provided by the London Boroughs, sports hall supply is projected to increase between now and 2013 (the supply base year for this study). Hopefully it will increase further between 2013 and 2021.
23. The impact of this increased provision is that Sports hall supply (or capacity) across London is projected to increase from 338,167 visits in the weekly peak period in 2010 to 363, 549 visits by 2021. However it is evident from these London wide figures that demand for sports hall space is greater than supply in 2010 and projected to remain so through to 2021.
24. These supply and demand projections do have a significant impact on the capacity of the existing and projected increase in the supply of sports halls and artificial grass pitches to meet future demand. The scale of this impact is set out in each of the individual sports hall reports.

Summary of Key Findings

25. Based on the supply and demand assessment findings and reported in terms of the 5 GLA sub regions the key headline findings are:

Swimming Pools Supply and Demand

- Across London the projected community demand for swimming pools in 2021 is in line with the projected supply or capacity of swimming pools, based on the known supply at 2013. In short at a London wide level demand and supply for swimming pools are broadly in balance.
- However there is variation within the five Sub regions with 3 of the 5 Sub regions having an excess of demand over supply They are:
 - Central sub region where demand exceeds supply by some 847 square metres of water;
 - East sub region where it is a very considerable 7,245 square metres of water; and
 - North sub region where it is 2,175 square metres of water (for context a 25 metres by 4 lane pool is 212 square metres of water).
 - So in these areas there is a need for additional swimming pool provision and / or the need to change the management of existing swimming pools so as to increase access.
- In 2 of the 5 Sub regions, there is an excess of supply over demand, They are:
 - South sub region with 2,850 square metres of water; and
 - West sub region where there is a 307 square metres of water positive supply/demand balance.
 - So in these areas there is the opportunity to consolidate swimming pool provision – based on the demand and supply.
- This is demonstrated on the London wide swimming pool map shown in Appendix 1.

Swimming Pools Number of Sites

- London has 273 swimming pool sites. The highest supply of swimming pool sites is in the South Sub Region Area, with 74 sites and 27% of the total swimming pool capacity across London. So one Sub Region area with 6 boroughs has over a quarter of the total London swimming pool sites.
- Of the 273 swimming pool sites in London 177 sites are public sites and 96 sites are commercial sites. Public swimming in public pools represents 64.8% of the total swimming pool stock in London. However if swimming participation increases and or some more swimming pools

Swimming Pools Quality

- Quality of swimming pools is a bigger issue than quantity, with the average age of swimming pools across London being 23 years (excluding the commercial stock). Modernisation / refurbishment of existing swimming pools is of greater priority than provision of new pools. This is comparatively more achievable if the GLA wishes to use the development planning system to direct developer's contributions to modernisation of the existing stock rather than fund new development.

Swimming Pools Accessibility

- Accessibility to swimming pools (based on where pools are located and where residents live) is high because some 91% of the London wide demand for swimming is located within the catchment area of a swimming pool. Satisfied demand is highest in South Sub Region Area at 95% of total demand and lowest in the North Sub Region Area, but still a very high 89% of total demand.
- Accessibility is however very much dominated by car travel and it is estimated that travel by car to pools is 62% of all the travel patterns. Again there is variation between the sub regions because of the differences in population access to cars in different areas of London. This ranges from the highest in the Central Sub Region Area at 46%, without access to a car to 22% in the West Sub Region Area.
- The walk to travel patterns (20 minutes or 1 mile catchment) does affect accessibility to pools. In Central Sub Region some 48.7% of all visits to pools are by walking. The significance of this where there is high walk to percentage then there is a requirement for a local network of pools to ensure accessibility – if accessibility to pools is a significant planning issue.
- Where car travel is the dominant travel mode for satisfied demand, North Sub Region and West Sub Region, then residents in these sub regions have a much higher accessibility and choice of pools because the catchment area is a 20 minute DRIVE time, as opposed to a walk to catchment which is 1 mile or 20 minutes WALKING.

Swimming Pools – How Full are the Pools?

- Used capacity is a measure of how much of a pool's capacity is being used at peak time. To note, pools are regarded as being close to full when they are at 70% of their theoretical capacity. The reason for setting the pools at this 70% level is because above this level pools

- The estimate is that the average level of pool capacity used across the 5 Sub regions is 69.1%, which is extremely close to the theoretical capacity level.
- Again there is variation across the Sub regions. Ranging from 84.6% of pool capacity used in the East Sub Region Area – so the pools are estimated to be very full in this sub region. This is predominantly based on the draw effect of the 2012 Aquatics Centre in legacy mode from 2013 onwards. Pools are also estimated to be full in the North Sub Region Area, with 77% of pool capacity used.
- So overall the estimate is that pools in the East Sub Region and North Sub Region, based on the known pool commitments and changes in swimming pool supply up to 2013 (but not beyond) and the projected population increases up to 2021 will be full by 2021.
- The South Sub Region has the lowest level of estimated pool capacity used at 58.5%, reflecting the large imbalance between pool supply and swimming demand in this area. Central Sub Region and the West Sub Region are close to each other, with 64.6% of pool capacity used in the Central Sub Region and 63.4% in the West Sub Region. This infers that in these two sub regions there is some limited unused pool capacity.

Sports Halls - Supply and Demand

- The London population in 2021 is projected to generate a demand for 2,486 badminton courts. The total capacity or sports hall supply across London is 1,795 badminton courts, available for community use courts.
- So across London total demand exceeds total supply by some 690 badminton courts - there is a negative supply/demand balance.
- All five Sub Region Areas have a negative supply/demand balance.
 - The sub region with the highest negative supply/demand balance is Central sub region with 240 badminton courts, across the 7 boroughs in the Central sub region.
 - The next highest negative balance is in East sub region with 167 badminton courts (10 boroughs).
 - West sub region is next with a negative supply/demand balance of 152 badminton courts (6 boroughs).
 - Followed by North sub region with a negative supply/demand balance of 81 badminton courts (3 boroughs).

- Whilst South sub region has the least negative supply/demand balance at 49 badminton courts (7 boroughs)
- This is demonstrated on the London wide sports halls map shown in Appendix 2.

Sports Halls - Number of Sites

- Across London in the 5 Sub regions there are 436 sports halls sites. There are a total of 603 individual main halls.
- The East sub region (with its ten boroughs) has 34% or some 149 sites out of the total 436 London wide sports hall sites. The South sub region (with its six boroughs) has 24% of the total London supply of sports halls with 106 sites.

Sports Halls - Quality and Scale

- Quality and scale of sports halls are big issues, with the average age of sports halls across London being 18 years (excluding the few commercial sites). So modernisation/ refurbishment of existing sports halls, is, like swimming pools, a priority but in the case of sports halls with new provision. Again modernisation is comparatively more achievable than new provision if the GLA wishes to use the development planning system to direct developers contributions to modernisation of the existing stock rather than fund new development.
- Of the 436 sports hall sites across London only around 70 sites are larger than the standard size of 4 badminton court size sports hall which provides for the full range of indoor hall sports at the community level of activity. There is a shortage of sports halls bigger than 4 badminton courts and this limits the range of activities which can be played at the same time – thereby limiting participation and sports development. Furthermore it is limiting the development of events use because there is not the space to host events with spectator space – even at the most modest level.

Sports Halls Accessibility

- Accessibility to sports halls (based on where sports halls are located and where residents live) is high because some 82% of the London wide demand for sports halls is located within the catchment area of a hall. Again the London average masks some area variation with South having some 95% of the satisfied demand for sports halls inside the catchment area of a hall and lowest in the Central Sub Region where 68% of demand has access to a sports hall.
- Across London the percentage of satisfied demand which travels to sports halls by car is 70%, with 24% travelling on foot and 6% by public

- In Central sub region, due to it having 46% of the population who do not have access to a car, it means it has a much higher walk to travel pattern to sports halls with 42% of all satisfied demand by walking. Given this finding and as with swimming pools to ensure accessibility to sports halls means there is a requirement for a network of local accessible facilities.

Sports Halls – How Full are the Halls?

- London wide the estimate is that the level of sports hall capacity used by 2021 based on the projected demand for and supply of sports halls will be that 91% of the sports hall capacity will be used.
- The lowest percentage for used capacity is in the South Sub Region at 84.1% of total sports hall capacity. The highest is in Central sub region where the halls are effectively at 100% of all sports hall capacity, estimated to be used by in 2021.
- Central Sub Region is the highest priority area for additional sports hall capacity based on the supply and demand findings and the issues of accessibility reported.
- The reasons for used capacity being high are because of the significant changes on the demand side. The sequence is that the London wide total population is projected to increase from 7,737,892 people in 2010 to 8,346, 806 by 2021. This is an increase of 608,914 people.
- The knock on impact on this population increase in terms of demand for sports halls, is that total demand for sports halls is projected to increase from 380,543 visits in the weekly peak period in 2010 to 402,759 visits in the same weekly peak period in 2021. This is a weekly peak period increase of 22,216 visits across London.

Artificial grass pitches - Supply and Demand

- Across London the five sub regions are projected to generate a demand for just under 269 pitches by 2021.
- This total demand compares with a London total supply across the five sub regions in 2021 of 138 pitches, available for community use.
- This means that total demand exceeds total supply by just over 130 pitches. In effect, the deficit between projected demand in 2021 and projected supply in 2021 is nearly the same as the provision of artificial grass pitches in 2013.

- All five sub regions have an excess of demand over supply so there is a negative supply/demand balance across London. The highest is in East Sub Region at 42 pitches. The lowest is in the North Sub Region where there is a deficit of over 11 pitches across the three boroughs.

Artificial grass pitches - Number of Sites

- London has a total supply of 158 artificial grass pitch sites. The East Sub Region with ten boroughs has the highest number of artificial grass pitch sites with 50 sites, which is 31% of the total London supply.
- Central Sub Region which has seven boroughs has the lowest supply of artificial grass pitch sites at 16 in total. This equates to 10% of the total London supply.
- Of the 158 artificial grass pitch sites in London, some 151 sites are public and 7 sites are commercial artificial grass pitches. The commercial sites are located in Central Sub Region (Southwark); East Sub Region (Greenwich which has 3 commercial sites); South Sub Region (Wandsworth); and West Sub Region (Harrow and Hillingdon one each).
- All Sub regions have double pitch sites but there are very few - Central Sub Region has 2 double pitch sites; East Sub Region has 5 double sites; North South Region has 3 double pitch sites; South Sub Region has 4 and West Sub Region also has 4.

Artificial Grass Pitches - Accessibility

- At the London wide level 56% of total demand for artificial grass pitches is within the catchment area of an artificial grass pitch. There is sufficient capacity at the site(s) to absorb this demand.
- The highest level of accessibility is in three of the Sub regions, these being North Sub Region, South Sub Region and West Sub Region where accessibility is 61% of total demand. It is lowest in the Central Sub Region at 41% of total demand being satisfied demand.
- It is estimated that some 78% of the demand for artificial grass pitches travels to them by car. This, therefore, is the dominant travel mode. The lowest percentage of visits to artificial grass pitches by car travel is in the Central Sub Region, but is still high at 70% of all visits.
- Some 18.9% of all the satisfied demand for artificial grass pitches across London is met by walking. This is highest in the Central Sub Region at 25.6% of all visits to artificial grass pitches. This is reflective of the fact that in the Central Sub Region some 46.1% of the population do not have access to a car.

- The lowest sub region for satisfied demand for artificial grass pitches met by walking is in the South Sub Region where 15.4% of all satisfied demand for artificial grass pitch is in the 20 minutes/1 mile walk to catchment area.

Artificial Grass Pitches – How Full are the Pitches?

- Given the findings reported above on the overall supply and demand balance it is not surprising to report that the estimate is that by 2021 (and most likely well before) the 158 artificial grass pitch sites across London will be full. This is a reflection of the supply and demand balance reported on and the impact of the projected changes in the London population.

Recommendations

26. The recommendations arising from the development of the evidence base are focused on its use in initiating a London wide facilities strategy and in assisting the GLA in 'encouraging all authorities that have yet to undertake a needs and evidence base approach to planning for community sport to do so' – as set out in the Mayor's *"A Sporting Future for London"* document (April 2009).
27. The recommendations are set out in the following order for each geographical scale:
- GLA London Wide
 - Individual London borough.

London Wide - Recommendation 1: Use of the Sport England Methodology

- 28. GLA to encourage local authorities to use Sport England methodology in their strategic planning to ensure a consistent approach to needs and evidence assessments across London.**

Context

29. This will ensure that future work, whether led by an individual local authority, National Governing Body of Sport, the GLA or Sport England is developed on a consistent basis right across London. This will lead to a consistent London wide picture of sporting need being developed.
30. This approach to strategic planning is essential and it will ensure that the methodology which is applied is consistent right across London and therefore the findings can be compared on a like for like basis right across London on an ongoing basis.

London Wide - Recommendation 2: Communication of findings

- 31. A Communications Plan needs to be developed to ensure that local authorities and other strategic partners are made aware of the findings and how the information can be applied at a local and regional level.**

Context

32. The scope and application of the needs and evidence base is very extensive and this will only become known to local authorities if they are made aware of what it contains and its range of actual applications.
33. Working through existing GLA and local authority planning forums and the five London Pro Active Partnerships, the GLA and Sport England need to ensure that the uses and applications of the evidence base are understood and recognised by local authorities and national governing bodies of sport. This will help to ensure that the scope and benefits of the work is known and that local authorities do integrate the findings into their planning for sport work.

London Wide - Recommendation 3: Development of policy

34. GLA Planning team to use this needs and evidence to support the development of policy on the provision of sports facilities.

Context

35. This needs and evidence base provides a London wide assessment of sports facilities needs up to 2021 (and beyond). As such it provides the basis for planning policies on the future provision of sports facilities for incorporation into future development spatial planning documents.

36. The needs and evidence base should support the GLA to implement the strategic objective of policy 3.20 (Sports facilities) of the draft replacement London Plan which states that:

"The Mayor's Sports Legacy Plan aims to increase participation in and tackle inequality of access to sport and physical activity in London particularly amongst groups/areas with low levels of participation."

37. The social infrastructure section of the new GLA Housing Supplementary Planning Guidance (SPG) sets out broad guidance for sports facility provision based on the findings of this work and presents a context for boroughs to investigate their local requirements and help them address national policy. The needs and evidence base should be refined in the light of more local circumstances to inform policy in Local Development Frameworks, and identify where appropriate provision and services should be assessed and planned to address the needs of local communities and groups. It should also be used as the basis for planning decisions to support development proposals that enhance and protect social infrastructure and prevent the net loss of social infrastructure in areas of defined need.

38. In developing policy 3.20 and in application of the needs and evidence base produced the GLA should consider setting out the **development policies** for future provision; scale of new development required with priority locations identified – spatially – and based on supply and demand and catchment area analysis for each specific facility and its location by three travel modes of car, walk to and public transport.

39. **Protection policies** for sports facilities that are needed to meet a known demand and should therefore be protected from development. This can be evidence based, with an assessment of the impact of provision being lost both in terms of supply and demand for future need and accessibility.

40. **Compensatory policies** setting out the policy for compensatory provision for loss of sports facilities in terms of scale, location and providing a community provision which is at least equal in quantity, quality and accessibility to the facility being developed. Again use of

London Wide - Recommendation 4: Strategic Site Assessments

41. GLA and Sport England apply the report findings to any strategic site or project assessments; i.e. to identify the key locations for major sports facilities.

Context

42. The needs and evidence base should be applied in strategic site or project assessments. For example, the evidence should be used as part of the assessment and identification of the key locations for major sports facilities. These assessments should also include an overlay of sports participation profiles and location with the scale and location of existing sports facilities from the evidence base. This will enable a strategic assessment of the "strategic gaps" in facility provision to be undertaken and will provide a baseline of information to guide development. In turn, this will help to understand the scale of facilities required and the priority locations for these facilities to best meet sports participation needs and to plug the gaps in provision.

Policy 3.20 of the draft replacement London Plan states that

B Development proposals that increase or enhance the provision of sports and recreation facilities will be supported. Proposals that result in a net loss of sports and recreation facilities, including playing fields should be resisted. Temporary facilities may provide the means of mitigating any loss as part of proposals for permanent re-provision. Wherever possible, multi-use public facilities for sport and recreational activity should be encouraged. The provision of floodlighting should be supported in areas where there is an identified need for sports facilities to increase sports participation opportunities, unless the floodlighting gives rise to demonstrable harm to local community or biodiversity.

C Where sports facility developments are proposed on existing open space, they will need to be considered carefully in light of policies on Green Belt and protecting open space as well as the boroughs' own assessment of needs and opportunities for both sports facilities and for green multifunctional open space.

43. The evidence base should also be used to review **major project developments** and to undertake impact assessment work. The evidence base does provide a spatial assessment right across London of facility requirements and identifies on a consistent basis the areas of under supply and over provision of facilities. Consequently it can be applied spatially to very quickly assess the impact of new development projects on existing provision – location, scale and catchment area and provide an impact assessment.

Local Authority Level - Recommendation 5: Application of the Needs and Evidence Base in the Development of Local Development Frameworks

44. GLA and Sport England to encourage the application of the needs and evidence base by local authorities in the development of planning policies in Local Development Frameworks.

Context

45. In essence the needs and evidence base provides the technical evidence base for the development of planning policies in Local Development Planning Frameworks (LDF) (or any successor development plan). It should also be used as the basis for planning decisions to support development proposals that increase and enhance sports provision and prevent the net loss of facilities in areas of defined need.
46. The draft Replacement London plan policies 3.17 and 3.20 set out that for local authorities preparing LDF's

D Within LDF's Boroughs should assess the need for sports and recreation facilities in line with PPG 17 at the local and sub-regional level regularly, and secure sites for a range of sports facilities.

This Policy complements Policy 3.17 on social infrastructure. Boroughs should refer to both policies when planning for sports facilities.

Sports and recreation facilities are important parts of the social infrastructure, providing a range of social and health benefits for communities and neighbourhoods. Backed by the Mayor's Sports Legacy Plan, these will be given increasing prominence by and after the 2012 Games. London aspires to contribute 150,000 towards Sport England's target of getting 1 million people doing more sport by 2012.

London is short of indoor community facilities such as sports halls and swimming pools. The city also has an older stock of indoor facilities than other English regions and replacement for modernisation of existing provision is critical. The Mayor will initiate a facilities strategy for London to identify existing deficiencies and address additional demand from population growth. The strategy will then be used to inform regional sports facility planning and investment. This will build upon work already being done by Sport England with a number of London boroughs who are developing a needs and evidence base for the strategic planning for community sport. The Mayor will encourage all authorities that have yet to

undertake a needs and evidence based approach to planning for community sport to do so by the end of 2012. Built sports facilities should only be accommodated on green open space, if that area has been identified by a borough open space strategy as surplus to requirements for any open green space use.

The Mayor will work with local authorities, national governing bodies of sport, Sport England, sporting foundations and trusts, the private sector and others to provide investment to support the development of new facilities or the refurbishment of existing facilities. The focus will principally be on small, community, park or estate-based projects. The Mayor will also support the establishment of multi-sport hub sites on playing fields in London. Shared use of sports facilities in schools (state and independent), further and higher education institutions, commercial schemes, community centres and church halls will help reduce demand for new provision”.

47. The needs and evidence base that has now been compiled by the GLA working with Sport England provides the robust evidence base which can be applied at the local level to policies 3.17 – 3.20 of the draft replacement London plan.
48. The needs and evidence base meets PPG 17 requirements in developing an evidence base based on quantity, quality and accessibility assessments which can be developed into a local planning standard for future provision and forms the basis for determining developer contributions. It can also be applied to develop the policy for developer contributions and as on site, off site contributions as well as the reasoned justification for the calculation of actual contributions based on the demand generated for sports facilities.

Local Authority Level - Recommendation 6: Local and National Partners to utilise the findings in their strategic sports facility planning work

49. **Strategic organisations such as local authorities and national governing bodies of sport to utilise the findings in their strategic sports facility planning work.**

Context

50. The application of the evidence base provides, on a consistent basis, an assessment of the relative priorities for facility provision within the local authorities and across each Sub Region Area. The evidence base can be used to provide a strategic overview of facility requirements within each Sub Region and local authority, identifying which areas/locations have the greatest unmet demand, by individual local authority or across a cluster of local authorities. It can therefore be used by local authorities and national governing bodies of sport in strategic planning to direct investment to where there is the greatest need and to make strategic

51. It is recognised that the outcomes of this work need to be set with the profile of sports participation for young people, adults, older people and disabled people. This will ensure that there is a participation profile for community sports participation in the local authority based on which sports people play and where they live. This can then be matched / overlaid to where the sports facilities are located and how the access/management of these sports facilities matches the local community sports participation profile.
52. The combined outcomes of this work will provide a local authority or national governing body of sport with a participation and sports facility profile of which facilities are needed at which location and at which scale to meet the sports participation profile of the borough / sport now and in the future.

Local Authority Level - Recommendation 7: Evidence base to be used to inform investment decisions into sports facilities

- 53. GLA and Sport England to work with various organisations (local authorities, National Governing Bodies of Sport, Developers etc) to use this evidence base when considering investment decisions into sports facilities.**

Context

54. As set out in the main findings, the needs for sports halls and artificial grass pitches are extensive in most areas of London to meet population growth and projected changes in sports participation based on this population growth. The needs and evidence base can be used by local authorities and national governing bodies of sport in strategic planning to direct investment to where there is the greatest need and to make strategic decisions about the existing facilities stock to meet the needs of residents.
55. It is recognised that the current financial climate is likely to affect the availability of significant capital investment for new sports facilities. It is therefore imperative that all organisations focus on ensuring a maximum return on the investment that is available (whether it is capital funding for new build or refurbishments or revenue funding) for the benefit of community sport.
56. Policy 3.20 of the GLA draft Replacement London Plan states that: (please note that the GLA advise that this part of the draft plan will be amended to reflect recent changes related to Building Schools for the Future programme)

"In addition to renewing a school's building stock, there may be opportunities to identify complementary specialised sports facilities

that can be shared by schools, the community and sports clubs. Through attracting specialist clubs and coaches, this can assist in raising standards of performance and widen opportunities for students and community users. If such a facility fills an identified gap in provision, funding may be available through a sport's national governing body or other partners. "

57. The evidence base can help determine the opportunities and more importantly the **needs case** for co-location of education and community sports facilities on one site and the impact of closing existing sports facilities.
58. The evidence base can also be used in the financial planning to provide the projected throughput for a balanced programme of community sports use at any project at a given scale - in effect "providing the numbers". This helps to determine what the economic cost of change is and what is the impact on the accessibility to sports facilities by community sport from the proposed changes.
59. It also provides the opportunity to do the "what if options" and assess the impact of closing existing sports facilities and meeting that demand at new sites. The evidence base can help to answer the following questions:
 - Will the proposed changes work?
 - Can the community demand be absorbed?
 - Is there the opportunity to change programming to move sports activity to different locations but without a loss of accessibility by the community sports groups?
60. All these options and others can be developed by use of the evidence base in the development of an Investments Strategy for Sport - to maximise the return on existing and any potential new investment programmes/projects.

David Payne

Independent Consultant to Sport England and the Greater London Authority for this Project.

12th August 2010

Appendix 4 – List of which London boroughs appear in which GLA Planning sub region

London Central Sub Region

Lambeth
Southwark
Kensington and Chelsea
City of Westminster
Camden
Islington
City of London

London East Sub Region

Havering
Lewisham
Greenwich
Bexley
Waltham Forest
Redbridge
Tower Hamlets
Hackney
Newham
Barking and Dagenham

London North Sub Region

Barnet
Enfield
Haringey

London South Sub Region

Kingston upon Thames
Croydon
Bromley
Sutton
Richmond upon Thames
Merton
Wandsworth

London West Sub Region

Hounslow
Ealing
Hillingdon
Harrow
Brent
Hammersmith and Fulham

Appendix 5 - How The Study Was Undertaken and the Needs and Evidence Compiled

61. The study uses a consistent methodology to assess the supply and demand for all three sports facility types – swimming pools, sports halls and artificial grass pitches - across the whole of London and within the five GLA Sub regions. The methodology used is the Sport England facilities planning model (fpm). The Appendix to each report provides a detailed description of the fpm and how it has been applied in this study.
62. The study has a spatial assessment and is based on the catchment areas of the three facility types and the three travel modes of car, public transport and walking.
63. The study report and findings are set out for each of the five GLA Sub regions and the boroughs within each study area. There is also a cross London report which reports the findings across the five Sub regions for each of the three sports facility types, so as provide a London wide planning assessment and spatial evidence base.
64. So in essence the study output has several discreet reports and these are
 - An assessment of the supply and demand for each of the three sports facility types in each of the 5 GLA Sub regions (so 3 sports facility types x 5 Sub regions = 15 reports).
 - An assessment of the supply and demand for each of the three sports facility types ACROSS the 5 GLA Sub regions = 3 reports).
65. Each individual report sets out the supply and demand findings under 7 discreet headings and this is in tabular form. Following each table the main findings are reported in bullet point form. There is then a summary of the main findings at the end of each report.
66. In addition, there are 3 maps for each of the 15 individual reports. These maps set out:
 - the scale and location of unmet demand for each facility type in each of the sub regions;
 - the scale and location of aggregated unmet demand for each facility type in each sub region; and
 - the relative share and access to each facility type in each sub region

(Note: Appendix one to each report provides a definition and description for each of these terms)

67. The baseline for the study and report is to assess the provision for each sports facility as at 2013. This information on facility provision has been compiled and extracted from the Sport England Active Places database of sports facilities.
68. Every local authority has confirmed its programme of commitments between 2010 and 2013, so that we can base the study on the known position of facility provision in each borough and for each facility type in 2013. This includes the facilities in the Olympic Park being considered in their post Games legacy mode.
69. 2013 was considered as an appropriate date to look at known commitments for local authorities. Asking local authorities to comment on their facility stock / facility plans beyond this date was considered unrealistic and would have had a negative impact on the robustness of the data.
70. The study has applied the projected population in London as at 2021 based on the GLA population projections.
71. So, in essence the supply base for the study is the sports facility stock as at 2013 and including known changes and commitments. The demand side of the study is based on the projected London population in 2021, based on the GLA population projections as at April 2010.
72. This supply and demand approach allows the future planning to be based on the known sports facility supply in 2013 and assessing the future demand for sports facilities based on the projected population in 2021.

Sport England Facilities Planning Model
London sub regions - Swimming Pools

Profile of Swimming Pools in 2013 and Weighted to Age and Condition as at 2021
London Population as at 2021 with GLA Projections April 2010
(Active Places Dataset as at March 2010) including known London Commitments

Total Supply

Table 1 - Supply	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Number of pools	385	76	95	36	105	73
% of pools in London Areas		19.7%	24.7%	9.4%	27.2%	19%
Number of pool sites	273	59	61	25	74	54
% of pool sites in London Areas		21.6%	22.3%	9.2%	27.1%	19.8%
Public or Commercial pool sites						
Commercial	96	24	15	10	24	23
Public	177	35	46	15	50	31
Supply of total water space in square metres	93923.27	17754.36	25241.38	8779.65	24193.88	17954
Capacity of All Pools						
Supply of publicly available water space in square metres (scaled with hrs avail in pp)	81446.1	15561.35	21088.86	7651.91	20800.67	16343.3
Supply of total water space in Visits	661749	126436	171347	62172	169005	132789
Waterspace per 1000 population	11.25	11.77	9.56	9.43	14.04	11.62

Commentary on Total Supply

- London has 273 swimming pool sites. The highest supply of swimming pool sites is in the South sub-region, with 74 sites and 27.1% of the total swimming pool capacity. So one Sub-region with 6 boroughs has over a quarter of the total London swimming pool sites.
- The lowest provision is in the North sub-region with 25 sites and 9.2% of the London total number of swimming pool sites.
- Square metres of water per 1,000 population is a useful comparative standard to use to assess provision on a consistent basis across the boroughs. The average waterspace for London is 11.25 square metres of water. Again the South sub-region has the highest provision on this standard at 14.04 square metres of water and the lowest is in the North sub-region at 9.43 square metres of water.
- Of the 273 swimming pool sites in London 177 sites are public sites and 96 sites are commercial sites. Public swimming in public pools represents 64.8% of the total swimming pool stock in London.
- In all Sub-regions public provision is greater than commercial swimming pool provision. However the range is quite wide, in the East sub-region there are 15 commercial pools and 46 public swimming pool sites. So public pools represent 75.4% of the total swimming pool sites.
- Despite having the highest number of pool sites in the South it only has the second highest amount of waterspace, whilst East has the highest amount of waterspace and the second highest number of pool sites.

Total Demand

Table 2 - Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Population GLA 2021 Population	8346806	1508575	2639428	930765	1723474	1544563
Swims demand Visits per week peak period % of London Area	503664	93325 18.5%	161151 32%	55893 11.1%	102091 20.3%	91203 18.1%
Demand as waterspace – with comfort factor % of London area	88556.26	16408.73 18.5%	28334.23 32%	9827.42 11.1%	17950.11 20.3%	16035.78 18.1%
% of population without access to a car	29.1	46.1	30.7	24.9	20.6	23.5

Commentary on Total Demand

- The most significant point about the total demand findings is the variation in the total population levels across the five Sub-regions. This ranges from a high of 2.63 million in the East sub-region to 930,700 in the North sub-region. So in comparing the total demand for swimming across the five areas it is going to be significantly affected by the range in population differences.
- In the East sub-region the highest total demand for swimming of any of the 5 Sub-regions at 161,151 visits at peak times. East sub-region has nearly one third of the total London demand for swimming in 2021 – but also has the highest population.
- The East sub-region demand for swimming at 32% of the total London demand contrasts with the East sub-region supply which is 22.3% of the total London swimming pool supply.
- North sub-region has the lowest projected total demand for swimming at 55,893 visits, which is 11.1% of the total London demand for swimming. North sub-region has 9.2% of the total London supply for swimming. The North also has the lowest population of the five areas at 930,700 people but this still generates 11.1% of the total demand for swimming across three boroughs.
- The percentage of the London population who do not have access to a car is 29.1%. There is a wide range across the five Sub-regions; the lowest is in South sub-region where 20.6% of the South sub-region population do not have access to a car. In the West sub-region it is 23.5% of the population without access to a car, with 24.9% in the North sub-region, 30.7% in the East sub-region and the highest is in the Central sub-region at a very high 46.1% of the population are projected not to have access to a car in 2021.
- The percentage population with and without access to a car is important in terms of swimming pools because car travel is the dominate travel mode to pools. However as reported in each Sub-region report there are very wide variations across each Sub-region. For example in the West sub-region the percentages are 72% of all visits to pools are by car, with 6% by public transport and 22% by walking. However in the East sub-region the percentages are 62% of all visits to pools are by car, with 7% by public transport and 31% by walking.
- The walk to catchment area of swimming pools is 20 minutes/1 mile walk to. Whilst the drive to catchment area is also 20 minutes, but it is drive time. So for Areas which have a high walk to visit pattern to swimming pools the requirement is for a network of local accessible swimming pools. For Sub-regions where drive to is the dominate travel mode then there is a much wider choice and access to swimming pools over a wider area (even in London driving times).

Supply/Demand Balance

Table 3 - Supply/Demand Balance	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Supply						
Swimming pool provision (square metres) scaled to take account of hours available for community use	81446.1	15561.35	21088.86	7651.91	20800.67	16343.3
Demand						
Swimming pool provision (square metres) taking into account a 'comfort' factor	88556.26	16408.73	28334.23	9827.42	17950.11	16035.78
Supply / Demand balance						
Variation in square metres of provision available compared to the minimum required to meet demand.	-7110.16	-847.38	-7245.37	-2175.51	2850.56	307.52

Commentary on Supply/Demand Balance

These figures are simple totals for supply and demand within the 5 Sub-regions and do not factor in the location of the swimming pools, their catchments, the geographical spread of the population or any cross boundary movements.

- The 5 Sub-regions are projected to generate a demand for 88,556 square metres of water (taking account of the comfort factor that a pool is comfortably full when it reaches 70% of its total capacity). This demand compares with a total capacity or supply across the 5 Sub-regions of 81,446 square metres of water.
- This means that total demand exceeds total supply across the 5 Sub-regions by 7,110 square metres of water and there is a negative supply/demand balance of this amount. By way of context 7,110 square metres of water equates to 33 swimming pools if each pool was a 25 metres x 4 lanes swimming pool, which is 212 square metres of water. (Note: it is not proposed that changes in supply and demand are made of this scale. The reference is to illustrate what the square metres of water converts to in terms of pool size).
- 3 of the 5 Sub-regions have an excess of demand over supply, so there is a negative supply/demand balance in these authorities. They are: Central where demand exceeds supply by some 847 square metres of water which is equivalent to around 4 pools if each

pool was a 25metre by 4 lane pool, East where it is a very considerable 7,245 square metres of water, equivalent to around 34 pools of the same scale; and North where it is 2,175 square metres of water, equivalent to around 10 pools of the same scale.

- In 2 of the 5 Sub-regions, there is an excess of supply over demand, so there is a positive supply/demand balance. They are South with 2,850 square metres of water; and West where there is a 307 square metres of water positive supply/demand balance.
- So the London wide overall negative supply/demand balance has a very different representation within each Sub-region. Going from a negative 7,245 square metres of water in East to a positive 2,850 square metres of water in South.
- It is important to note that whilst this provides the London wide picture there is, as already mentioned, considerable variation in the supply and demand balance across the five sub-regions and this is reported in detail in each area report.

Satisfied Demand

Table 4 - Satisfied Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total demand which is satisfied (visits)	460520	85312	145108	49903	97209	82988
% of total demand satisfied	91.4	91.4	90	89.3	95.2	91
% of demand satisfied who travelled by car	62.2	42.1	60.5	70.9	69.9	71.6
% of demand satisfied who travelled by foot	30.5	48.7	30.8	22.2	25.2	22.2
% of demand satisfied who travelled by public transport	7.3	9.2	8.7	6.9	4.9	6.2
Demand Retained	446209	70675	134252	42763	84127	72357
Demand Retained - as a % of Satisfied Demand	96.9	82.8	92.5	85.7	86.5	87.2
Demand Exported	14311	14636	10856	7140	13082	10631
Demand Exported - as a % of Satisfied Demand	3.1	17.2	7.5	14.3	13.5	12.8

Commentary on Satisfied Demand

- Across the 5 Sub-regions, 91.4% of the total demand for swimming is satisfied demand. (defined as demand for a swimming pool which is within the catchment area of a pool and there is sufficient capacity at that pool to absorb the demand). The variation across the 5 Areas is limited, ranging from the highest in South, which has the highest supply of swimming pool sites at 74 in total, to the lowest which is in North, with the lowest number of pool sites but still a very high 89.3% of total demand is satisfied demand.
- The percentage of satisfied demand which travelled by car is 62.2% as the London average. This ranges from the lowest in the Central sub-region at 42.1%, which also has the highest percentage of the population without access to a car at 46.1% of the Central sub-region population, to the highest in the West sub-region at 71.6%.
- In terms of the percentages of satisfied demand which travels to swimming pools on foot, this has a wider range across the Sub-regions. The average for the 5 Sub-regions is 30.5% of all satisfied demand travelling on foot to pools. The highest percentage is in Central at 48.7% and the lowest is in both North and West at 22.2% of all satisfied demand to pools travelling by walking.
- The highest percentage for satisfied demand travelling by public transport is also in Central at 9.2% of total satisfied demand. The lowest percentage of satisfied demand travelling by public transport is in South at 4.9% of total satisfied demand. The London average is 7.3% of satisfied demand travelling by public transport.
- The level of satisfied demand which is retained (defined as demand for swimming from within a borough and which is met at pools in that borough) is very high at a London average of 96.9%. However there is again some variation across the sub-regions with retained demand being some 82.8% of total satisfied demand in the Central sub-region and 92.5% in the East sub-region. The reason for the variation is down to where the pools are located and if there are pools located on the periphery of a sub-region so that it will import demand compared with pools located more centrally in the sub-region and its catchments will not extend far beyond the area boundary.

Unmet Demand

Table 5 - Unmet Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total demand not being met	43144	8013	16043	5990	4882	8216
Unmet demand as a % of total demand	8.6	8.6	10	10.7	4.8	9
Unmet demand as waterspace (with comfort factor)	7585.69	1408.9	2820.78	1053.2	858.32	1444.5
% of Unmet Demand due to:						
Lack of Capacity	14.6	18.2	19.1	15.3	7.6	6.2
% of Unmet Demand due to:						
Outside Catchment	85.4	81.8	80.9	84.7	92.4	93.8
Outside Catchment	85.4	81.8	80.9	84.7	92.4	93.8
% Unmet demand who do not have access to a car	82	80.3	78.3	81.2	86.4	89.1
% of Unmet demand who have access to a car	3.3	1.5	2.7	3.5	6	4.7
Lack of Capacity;	14.6	18.2	19.1	15.3	7.6	6.2
% Unmet demand who do not have access to a car	10.3	15.8	11.2	11.3	6.4	4.4
% of Unmet demand who have access to a car	4.4	2.4	7.8	4.0	1.2	1.7

Commentary on Unmet Demand

- Across the 5 Sub-regions the total level of total unmet demand is 7,586 square metres of water, with the comfort factor applied. This equates to 35 swimming pools if each pool was a 25 metres x 4 lane pool. (Note: this reference is to provide a context and scale for the level of unmet demand is not saying this level of provision is what or should be provided).
- Unmet demand is caused by two factors (1) there is too much demand for a swimming pool to absorb all the demand in its catchment area and there is no other pool within the catchment area of where the demand is located which can absorb this demand. (2) demand is located outside the catchment areas of a swimming pool and is then defined as unmet demand.
- Across the 5 sub-regions, 14.6% of unmet demand is related to lack of capacity and 85.4% of total unmet demand is due to it being located outside the catchment area of a swimming pool. So the strategic planning issue is much more about location, catchment areas and access to swimming pools rather than the lack of actual waterspace. The big driver for unmet demand is about pool location and a considerable amount of unmet demand by walkers to pools who do not live within the catchment area of a pool and so it is unmet demand. The good news in strategic planning terms is that resolution of this issue is much more about management and getting the demand to the pools, rather than new swimming pool provision because the unmet demand is due to lack of capacity.
- The lowest level of unmet demand is in the South sub-region at 858 square metres of water and of this only some 7.6% is due to lack of capacity and 92.4% is due to demand being located outside the catchment area of a swimming pool, of which 86.4%(of the 92.4%) is demand which does not have access to a car.

Used Capacity

Table 6 - Used Capacity	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total number of visits used of current capacity	457521	81649	145011	47894	98795	84172
% of overall capacity of pools used	69.1	64.6	84.6	77	58.5	63.4
% of visits made to pools by walkers	30.6	49.7	30.6	22.2	26.2	21.9
% of visits made to pools by road	69.4	50.3	69.4	77.8	73.8	78.1
Visits Imported						
Number of visits imported	11311	10974	10759	5131	14667	11815
As a % of used capacity	2.5	13.4	7.4	10.7	14.8	14
Visits Retained						
Number of Visits retained	446209	70675	134252	42763	84127	72357
As a % of used capacity	97.5	86.6	92.6	89.3	85.2	86

Commentary on Used Capacity

- Used capacity is a measure of how full the pools are and pools are regarded as being close to full when they are at 70% of their theoretical capacity. The reason for setting the pools at this 70% level is because above this level pools become uncomfortably full and there is limited water space to enjoy the activity. The 70% level is referred to as the comfort level factor.
- The model indicates that the average level of pool capacity used across the 5 Sub-regions is 69.1% and so right on pools full level with the comfort factor of 70%.
- There is quite a range of pool capacity used across the five sub-regions, with it ranging from 84.6% of pool capacity used in the East sub-region – so the pools are estimated to be very full in this area and predominantly based on the draw effect of the 2012 Aquatics Centre in legacy mode from 2013 onwards. (Findings developed in the East sub-region report). Pools are also estimated to be over the 70% level in North sub-region with 77% of pool capacity used. So the estimate is that pools in the East and North sub-regions based on the known pool commitments and changes up to 2013 (but not beyond) and the projected population increases up to 2021 will be full by 2021.
- The lowest level of estimated pool capacity used is in the South sub-region at 58.5% of pool capacity used. Central and the West percentages, are close with 64.6% of pool capacity used in Central and 63.4% in West. So in these two areas there is some limited unused pool capacity.
- In terms of demand imported into one authority from a resident whose nearest pool is in that authority but they live outside it this ranges from 14.8% of used capacity being imported in the South sub-region, to a low of only 7.4% of used pool capacity being imported in the East sub-region.
- In terms of the demand which is retained within a borough as a percentage of the total used capacity this is highest in East where retained demand represents some 92.6% of used capacity. It is lowest in South where retained demand is 85.2% of the total used capacity in South.

Relative Share

Table 7 - Relative Share	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Score - with 100 = London share	100	106	88	92	115	105
+/- from GLA share	0	6	-12	-8	15	5

Commentary on Relative Share

- In addition to the supply and demand analyses reported on so far, there is also a relative share analysis. Relative share provides a different view point in that it looks at the share of the opportunity for people to use facilities, taking into account the number of users within the local area, and the size and availability of swimming pools within the catchment of the users of these pools. A simple description of relative share is to consider swimming pool provision as a cake, its size being proportionate to the facility's capacity, i.e., the number of pools and the number of hours available for use.
- The relative share analysis divides the 'capacity cake' amongst the number of users who are within catchment of the pool provision. The figures used within relative share analysis calculated at output level, and aggregated to 1km squares within the maps. These figures are compared to the London relative share level which is set at 100. When looking at the Relative Share maps this means that anywhere in the local area which has a value above 100 has a greater relative share than the London wide level (i.e. residents of that area have a greater opportunity to use swimming pools than the London average). In turn, any area with a value below 100 has a lower relative share than the London wide level and therefore the residents of that area have less opportunity to use swimming pools than the London average. This helps to identify areas which require intervention to improve access for residents to swimming pools at a local and borough wide level.
- Two Sub-regions have a minus value and therefore residents in these areas have a relative share of waterspace which is below the London norm, set at 100. These areas are East with a value of - 12 and North with a value of - 8 to the London norm.
- The other three Sub-regions have a relative share value which is above the London norm and therefore residents in these areas have a better relative share of waterspace to the London norm. These areas are, Central +6, South +15 and West at +5.
- Details of the locations for the highest and lowest relative share values in the Sub-regions are set out in the 5 Sub-region reports.

Summary of Main Findings

Total Supply

- The London population varies significantly across the five Sub-regions and this will be a very major influence on the overall findings across all seven categories of analyses. This has to be said explicitly. The level of population variation means the five sub-regions are not directly comparable. The range is from an estimated population in 2021 in the East sub-region of 2,639,428 people to 930,765 people in the North sub-region.
- London has 273 swimming pool sites. The highest supply of swimming pool sites is in the South sub-region, with 74 sites and 27.1% of the total swimming pool capacity across London. So one Sub-region with 6 boroughs has over a quarter of the total London swimming pool sites.
- The lowest provision is in the North sub-region with 25 sites and 9.2% of the London total number of swimming pool sites. The North sub-region has 3 boroughs.
- Square metres of water per 1,000 population is a useful comparative standard to use to assess provision on a consistent basis across the boroughs. The average waterspace for London is 11.25 square metres of water. Again the South sub-region has the highest provision on this standard at 14.04 square metres of water and the lowest is in the North sub-region at 9.43 square metres of water.
- Of the 273 swimming pool sites in London 177 sites are public sites and 96 sites are commercial sites. Public swimming in public pools represents 64.8% of the total swimming pool stock in London.
- In all Sub-regions public provision is greater than commercial swimming pool provision. However the range is quite wide, in the East sub-region there are 15 commercial pools and 46 public swimming pool sites. So public pools represent 75.4% of the total swimming pool sites in the East.
- In the Central sub-region there is a much closer balance between public and commercial provision. There are 35 public swimming pool sites and 24 commercial swimming pool sites. So public pools represent 59.3% of the total swimming pool stock in the Central sub-region.
- Despite having the highest number of pool sites in the South it only has the second highest amount of waterspace, whilst East has the highest amount of waterspace and the second highest number of pool sites.

Total Demand

- The most significant point about the total demand findings is the variation in the total population levels across the five Sub-regions. This ranges from a high of 2.63 million in the East sub-region to 930,700 in the North sub-region. So in comparing the total demand for swimming across the five areas it is going to be significantly affected by the range in population differences.

- East sub-region has the highest total demand for swimming of the 5 Sub-regions at 161,151 visits at peak times. East sub-region has nearly one third of the total London demand for swimming in 2021.
- The East sub-region demand for swimming at 32% of the total London demand contrasts with the East sub-region supply which is 22.3% of the total London swimming pool supply.
- North sub-region has the lowest projected total demand for swimming at 55,893 visits, which is 11.1% of the total London demand for swimming. North sub-region has 9.2% of the total London supply for swimming.
- The percentage of the London population who do not have access to a car is 29.1%. There is a wide range across the five Sub-regions; the lowest is in South sub-region where 20.6% of the South sub-region population do not have access to a car. In the West sub-region it is 23.5%, with 24.9% in the North sub-region, 30.7% in the East sub-region and the highest is in the Central sub-region at a very high 46.1% of the population are projected not to have access to a car in 2021.
- The percentage population with and without access to a car is important in terms of swimming pools because car travel is the dominate travel mode to pools. There are very wide variations across each Sub-region. For example in the West sub-region the percentages are 72% of all visits to pools are by car, with 6% by public transport and 22% by walking. However in the East sub-region the percentages are 62% of all visits to pools are by car and 31% by walking.
- The walk to catchment area of swimming pools is 20 minutes/1 mile walk to. Whilst the drive to catchment area is also 20 minutes but it is drive time. So for Areas which have a high walk to visit pattern to swimming pools (East) the requirement is for a network of local accessible swimming pools. For Sub-regions where drive to is the dominate travel mode (West and South) then there is a much wider choice and access to swimming pools over a wider area (even in London driving times).

Supply/Demand Balance

These figures are simple totals for supply and demand within the 5 Sub-regions and do not factor in the location of the swimming pools, their catchments, the geographical spread of the population or any cross boundary movements.

- The 5 Sub-regions are projected to generate a demand for 88,556 square metres of water (taking account of the comfort factor that a pool is comfortably full when it reaches 70% of its total capacity). This demand compares with a total capacity or supply across the 5 Sub-regions of 81,446 square metres of water.
- This means that total demand exceeds total supply across the 5 Sub-regions by 7,110 square metres of water and there is a negative supply/demand balance of this amount. By way of context 7,110 square metres of water equates to 33 swimming pools if each pool was a 25 metres x 4 lanes swimming pool, which is 212 square metres of water. (Note: it is not proposed that changes in supply and demand are made of this scale. The reference is to illustrate what the square metres of water converts to in terms of pool size).
- 3 of the 5 Sub-regions have an excess of demand over supply, so there is a negative supply/demand balance in these authorities. They are: Central where demand exceeds supply by some 847 square metres of water; East where it is a very considerable 7,245

square metres (equivalent to 34 pools, if each pool was a 25 metres by 4 lane pool) of water; and North where it is 2,175 square metres of water (equivalent to 10 pools of the same scale)

- In 2 of the 5 Sub-regions, there is an excess of supply over demand, so there is a positive supply/demand balance. They are South with 2,850 square metres of water (equivalent to 13 pools if each pool was 25metres by 4 lanes); and West where there is a 307 square metres of water positive supply/demand balance (1 pool of 25 metres by 4 lanes).
- So the London wide overall negative supply/demand balance has a very different representation within each Sub-region. Going from a negative 7,245 square metres of water in East to a positive 2,850 square metres of water in South. However there is considerable variation in the supply/demand balance in each sub-region – as reported - and the significance of these findings are drawn out in the individual area reports.

Satisfied Demand

- Despite the negative supply/demand balance, some 91.4% of the total demand for swimming is satisfied demand across the 5 Sub-regions (defined as demand for a swimming pool which is within the catchment area of a pool and there is sufficient capacity at that pool to absorb the demand).
- Satisfied demand is highest in South at 95.2% of total demand and lowest in the North, but still a very high 89.3% of total demand is satisfied demand.
- The percentage of satisfied demand which travels by car is 62.2% for the London average. This ranges from the lowest in the Central sub-region at 42.1%, (which also has the highest percentage of the population without access to a car at 46.1% of the Central sub-region population) to the highest in the West sub-region at 71.6%.
- In terms of the percentages of satisfied demand which travels to swimming pools on foot, this has a wider range across the Sub-regions. The average for the 5 Sub-regions is 30.5% of all satisfied demand travelling on foot to pools. The highest percentage is in Central at 48.7% and the lowest is in both North and West at 22.2% of all satisfied demand to pools travelling by walking.
- The significance of these findings are that where there is high walk to percentage of satisfied demand – Central - then there is a requirement for a local network of pools to ensure accessibility – if accessibility to pools is a significant planning issue.
- The walk to catchment area of swimming pools is 20 minutes/1 mile walk to. Whilst the drive to catchment area is also 20 minutes but it is drive time. So for Areas which have a high walk to visit pattern to swimming pools the requirement is for a network of local accessible swimming pools. For Sub-regions where drive to is the dominate travel mode then there is a much wider choice and access to swimming pools over a wider area (even in London driving times).

- Where car travel is the dominant travel mode for satisfied demand – North and West - then residents in these areas have a much higher accessibility and choice of pools because the catchment area is a 20 minute drive time, as opposed to a walk to catchment which is 1 mile or 20 minutes walking.
- The highest percentage for satisfied demand travelling by public transport is also in Central at 9.2% of total satisfied demand. The lowest percentage of satisfied demand travelling by public transport is in South at 4.9% of total satisfied demand. The London average is 7.3% of satisfied demand travelling by public transport.
- The level of satisfied demand which is retained (defined as demand for swimming from within a borough and which is met at pools in that borough) is highest in East at 92.5% of satisfied demand and lowest in Central at 82.8% of satisfied demand.

Unmet Demand

- Across the 5 Sub-regions the total level of total unmet demand is 7,586 square metres of water, with the comfort factor applied. This equates to 35 swimming pools if each pool was a 25 metres x 4 lane pool. (Note: this reference is to provide a context and scale for the level of unmet demand it is not saying this level of provision is what/should be provided).
- Unmet demand is caused by two factors (1) there is too much demand for a swimming pool to absorb all the demand in its catchment area and there is no other pool within the catchment area of where the demand is located which can absorb this demand. (2) demand is located outside the catchment areas of a swimming pool and is then defined as unmet demand.
- Across the 5 sub-regions, 14.6% of unmet demand is related to lack of capacity and 85.4% of total unmet demand is due to it being located outside the catchment area of a swimming pool. This is a somewhat surprising finding given the earlier comments on supply/demand balance and unmet demand. The finding does suggest that the strategic planning issue is much more about location, catchment areas and access to swimming pools (and relating these supply side findings to where people live) rather than about the lack of actual waterspace. Dealing with “managing the existing supply and getting people to the pools” is a less challenging requirement than finding ways to provide more pools.
- The lowest level of unmet demand is in the South sub-region at 858 square metres of water and of this only some 7.6% is due to lack of capacity and 92.4% is due to demand being located outside the catchment area of a swimming pool. This is consistent with the finding that South has 27.1% of the total supply of swimming pools sites but only 20.3% of the total London demand for swimming.
- Unmet demand is highest in East sub-region at 2,821 square metres of water and 19.1% of total demand for swimming in the East sub-region. Of this 19.1% of unmet demand is due to lack of capacity and 80.9% is due to demand being outside the catchment area of a swimming pool.

Used Capacity

- Used capacity is a measure of how full the pools are and pools are regarded as being close to full when they are at 70% of their theoretical capacity. The reason for setting the pools at this 70% level is because above this level pools become uncomfortably full and there is limited water space to enjoy the activity. The 70% level is referred to as the comfort level factor.
- The estimate is that the average level of pool capacity used across the 5 Sub-regions is 69.1% and so right on pools full level with the comfort factor of 70%.
- There is quite a range of pool capacity used across the Sub-regions. Ranging from 84.6% of pool capacity used in the East sub-region – so the pools are estimated to be very full in this area and predominantly based on the draw effect of the 2012 Aquatics Centre in legacy mode from 2013 onwards. (Findings developed in the East sub-region report).
- Pools are also estimated to be over the 70% level in North sub-region with 77% of pool capacity used. So the estimate is that pools in the East and North sub-regions, based on the known pool commitments and changes in swimming pool supply up to 2013 (but not beyond) and the projected population increases up to 2021 will be full by 2021.
- The lowest level of estimated pool capacity used is in the South sub-region at 58.5% of pool capacity used, again reflecting the large imbalance between pool supply and swimming demand in the South sub-region. Central and the West percentage are close to each other, with 64.6% of pool capacity used in Central and 63.4% in the West sub-region, so in these two areas there is some limited unused pool capacity.
- In terms of demand imported into one authority from a resident whose nearest pool is in that authority but they live outside it this ranges from 14.8% of used capacity being imported in the South sub-region, to a low of only 7.4% of used pool capacity being imported in the East sub-region.
- In terms of the demand which is retained within a borough as a percentage of the total used capacity this is highest in East where retained demand represents some 92.6% of used capacity. It is lowest in South where retained demand is 85.2% of the total used capacity in South.

Relative Share

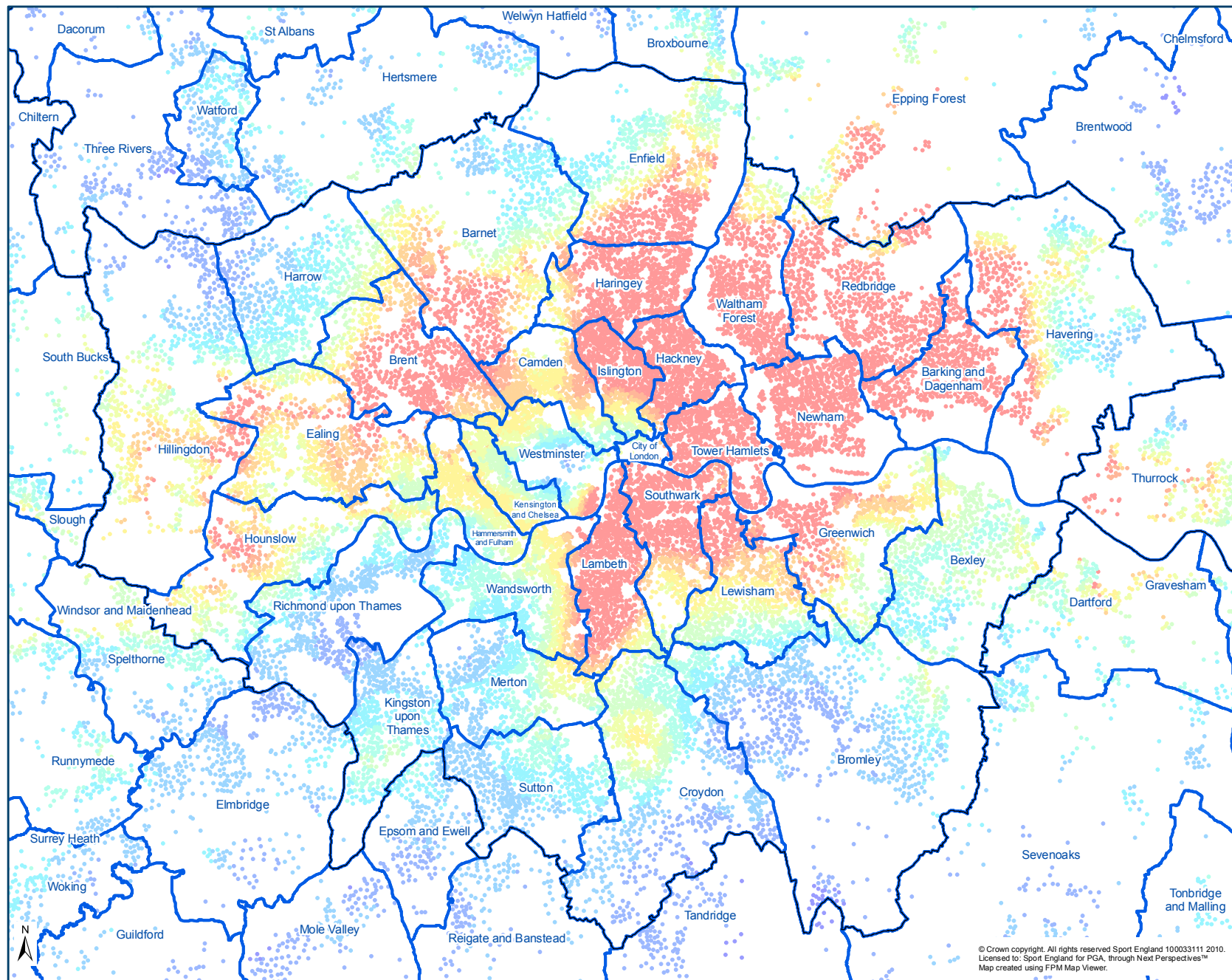
- Two Sub-regions have a minus value and therefore residents in these areas have a relative share of waterspace which is below the London norm, set at 100. These areas are East with a value of – 12 and North with a value of – 8 to the London norm.
- The other three Sub-regions have a relative share value which is above the London norm and therefore residents in these areas have a better relative share of waterspace to the London norm. These areas are, Central +6, South +15 and West also +5.
- Details of the locations for the highest and lowest relative share values in the Sub-regions are set out in the 5 Sub-region reports.

Facility Planning Model - Pools 2021 Aggregated Unmet Demand Run. London overview.

Aggregated Unmet Demand expressed as square metres of water (rounded to one decimal place).
GLA population projections for 2021 with known facility commitments as at 2013. Data outputs shown thematically (colours) at output area level and also aggregated at 1km square (figure labels).

Legend
 Regions
 Local Authorities (LA)
Aggregated Unmet Demand OA
OA Pop. Weighted Centroid

101 - 323
 91 - 100
 81 - 90
 71 - 80
 61 - 70
 51 - 60
 41 - 50
 31 - 40
 21 - 30
 11 - 20
 0 - 10



Sport England Facilities Planning Model
London sub regions - Sports Halls

Profile of Sports Halls in 2013 and Weighted to Age and Condition as at 2021
 London Population as at 2021 with GLA Projections April 2010
 (Active Places Dataset as at March 2010) including known London Commitments)

Total Supply

Table 1 - Supply	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Number of halls	603	79	217	67	146	94
% of Halls in London		13.1%	36%	11.1%	24.2%	15.6%
Number of hall sites	436	62	149	47	106	72
% of Hall Sites in London		14.2%	34.2%	10.8%	24.3%	16.5%
Supply of total hall space in courts	2263.48	302.08	801.61	243.48	553.49	362.82
Supply of publicly available hall space in courts (scaled with hrs avail in pp)	1795.31	228.82	621.55	191.7	454.14	299.09
Supply of total hall space in visits	363549	46337	125865	38819	91964	60565
Courts per 10,000 population	2.71	2	3.04	2.62	3.21	2.35

Commentary on Total Supply

- Across London in the 5 Sub-regions there are 436 sports halls SITES. There are a total of 603 individual main HALLS (minimum 3 badminton court size).
- 34.2%, some 149 sites out of the total 436 London supply of sports halls sites are in the East Sub-region, across the 10 boroughs in the East.
- Whilst 24.3%, some 106 of the total London supply of sports halls are in the South sub-region, with its 6 boroughs.
- The lowest number of sports hall sites is in the North sub-region with 10.8% of the total London supply, some 47 sports halls across the three boroughs in the North.
- Across London there are only 10 commercial sports halls sites out of the supply of 436 sites. The distribution of these sites is, 1 site each in Southwark, Finchley, Enfield, Bromley, Richmond, Sutton, Harrow and Hillingdon and 2 sites in Hounslow. (Note: the analysis has a cut off size for inclusion in the supply listing at 3 badminton courts or above. There are no doubt sports halls smaller than this in London and possibly these are commercial sites as part of indoor health and fitness centres, but these are not included in the analysis because they do not provide for the full range of indoor hall sports).
- Based on the comparator standard of number of courts per 10,000 population, there is a London wide average is 2.7 badminton courts per 10,000 population. The highest standard of provision is in South sub-region at 3.2 badminton courts per 10,000 population and the lowest is in Central at 2 badminton courts per 10,000 population. West sub-region is the other sub-region below the London average at 2.3 badminton courts per 10,000 population.

Total Demand

Table 2 - Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
GLA Population 2021	8346806	1508575	2639428	930765	1723474	1544563
Visits demanded –visits per week in peak period	402759	75957	127824	44283	81612	73082
Equivalent in courts – with comfort factor included	2486.17	468.87	789.04	273.35	503.78	451.13
% of population without access to a car	29.1	46.1	30.7	24.9	20.6	23.5

Commentary on Total Demand

- East sub-region has the highest total resident demand for sports halls at 127,824 visits per week in the weekly peak period, which is some 31.7% of the total London demand of 402,759 visits for sports halls. So the East sub-region has 34.1% of the total London Area supply of sports hall sites and 31.7% of the total London demand for sports halls.
- As with supply of sports hall sites, South has the second highest total demand for sports halls at 81,612 visits, which is 20.2% of the total London demand for sports halls.
- So the East and South sub-regions combined have over half at 51.9% of the total London wide demand for sports halls.
- The lowest demand for sports halls is in the North sub-region where its three boroughs generate a total demand for 44,283 visits which is 10.9% of the total London wide demand for sports halls.
- Access to sports halls is by three travel modes – car, public transport and walk to. The dominate travel modes are car and walk to and the London wide percentages for travel by each mode are: 71% of all visits to sports halls by car, 5% by public transport and 24% by walking.
- The catchments areas for these two travel modes are very different – 20 minutes DRIVE time by car and the same 20 minutes but 1 MILE by walking. To ensure accessibility to sports halls the locations need to benefit as many people as possible within the dominate travel modes and the percentage of the population who do/do not have access to a car very much influences the travel mode to sports halls.
- The London wide percentage of the population who do not have access to a car is 29.1% of the population. This varies quite considerably across the Sub-regions, with 46.1% of the population in the Central sub-region without access to a car; 30.7% on East sub-region; 24.9% in the North sub-region; 20,6% in the South sub-region and 23.5% in the West sub-region.
- These percentages very much influence the percentage of travel to sports halls by each travel mode and in short this will mean a higher percentage of travel to sports halls by car in South sub-region and a consequent high accessibility to sports halls because it is 20 minutes drive time. Whilst in Central it will be a much lower percentage and a high percentage of travel in the walk to catchment – based on a 1 mile catchment area – so a need for local centres in order for them to be accessible. These findings will be shown in the satisfied and unmet demand commentary.

Supply/Demand Balance

Table 3 - Supply/Demand Balance	LONDON	Central sub- region	East sub-region	North sub-region	South sub-region	West sub-region
Supply Hall provision (courts) scaled to take account of hours available for community use	1795.31	228.82	621.55	191.7	454.14	299.09
Demand Hall provision (courts) taking into account a 'comfort' factor	2486.17	468.87	789.04	273.35	503.78	451.13
Supply / Demand balance	-690.86	-240.05	-167.49	-81.65	-49.64	-152.04

Commentary on Supply/Demand Balance

- The London population in 2021 is projected to generate a demand for 2,486 badminton courts (taking account of the comfort factor that a sports hall is comfortably full when it reaches 80% of its total capacity).
- The total capacity or supply across London is 1,795 badminton courts, available for community use courts (taking account of the comfort factor)
- So across London total demand exceeds total supply by some 691 badminton courts - there is a negative supply/demand balance.
- All five Sub-regions have a negative supply/demand balance. The area with the highest negative supply/demand balance is Central with 240 badminton courts, across the 7 boroughs in the Central sub-region.
- The next highest negative balance is in East (which has the highest population of the 5 Sub-regions in 2021 at a projected 2,639,428 people) with 167 badminton courts (10 boroughs).
- West is next with a negative supply/demand balance of 152 badminton courts (6 boroughs).
- North has a negative supply/demand balance of 81 badminton courts (3 boroughs)
- Whilst South has the least negative supply/demand balance at 49 badminton courts (7 boroughs)

Satisfied Demand

Table 4 - Satisfied Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total demand which is satisfied (visits)	332138	52036	109996	39082	71424	59599
% of total demand satisfied	82.5	68.5	86.1	88.3	87.5	81.6
% of demand satisfied who travelled by car	70.7	49.9	68.1	75.7	78.8	80.5
% of demand satisfied who travelled by foot	24.3	42.3	26.4	20.3	17.4	15.5
% of demand satisfied who travelled by public transport	5.1	7.8	5.5	4	3.9	4
Demand Retained	323875	41276	103247	34421	65155	52356
Demand Retained -as a % of Satisfied Demand	97.5	79.3	93.9	88.1	91.2	87.8
Demand Exported	8262	10761	6750	4661	6269	7243
Demand Exported -as a % of Satisfied Demand	2.5	20.7	6.1	11.9	8.8	12.2

Commentary on Satisfied Demand

- As reported there is an overall negative supply/demand balance for sports halls of 690 badminton courts in 2021 across London, this finding is reflected in the level of satisfied demand across London and in the Sub-regions. The level of total demand which is satisfied demand (defined as demand which is located inside the catchment area of a sports hall and there is enough capacity at that sports hall to absorb that demand) is 82.5%, which is quite high but the England wide percentage is 90.2% of total demand being satisfied demand.
- Given the earlier findings reported, it is consistent that the South sub-region has the highest level of satisfied demand at 87.4% of total demand. To reiterate, the total supply of sports halls in South sub-region is 91,964 visits, whilst the total demand is 81,612 visits. Given this and that South has the lowest negative supply/demand balance then the level of satisfied demand is going to be high.
- Again, for the same reasons the lowest satisfied demand level is in Central sub-region at 68.5% of total demand being satisfied demand. The total supply of sports halls in Central sub-region is 46,337 visits, whilst the total demand is 75,957 visits. Also Central has the highest negative supply/demand balance at 240 badminton courts. Given this combination of factors the level of satisfied demand is going to be low.
- As set out under total demand the significance of the percentages on satisfied demand to sports halls by each of the three travel modes is about local accessibility. Across London the percentage of satisfied demand which travelled to sports halls by car is 70.7%, with 24.3% travelling on foot and 5.1% by public transport.
- Central has a much lower percentage of car travel to sports halls at 49.9% of all satisfied demand being by car travel. The walk to travel pattern is much higher then the London average at 42.3% of al satisfied demand by walking. The reason for these percentages is explained by the 46.1% of the Central sub-region population who do not have access to a car. Given this then the walk to pools is going to be very high and based on a 20 minutes/1 mile walk to catchment this means there is a requirement for a network of local accessible pools to ensure the residents can access sports halls.
- Satisfied demand by car travel is highest in highest in West sub-region at 80.5% of all satisfied demand being by car travel. The West sub-region has the second lowest percentage of the population who do not have access to a car at 23.5% of the West sub-region population (London wide average is 29.1% of the London population).
- The West sub-region percentage of satisfied demand which travelled to sports halls on foot is also the lowest at 15.5% of satisfied demand. So in contrast to Central, the West demand for sports halls becuae it is car based, will have a 20 minute drive time and access to a wider number and choice of sports halls because of the much larger catchment area.
- Satisfied demand by public transport is low in every Sub-region. The highest percentage is in Central at 7.8% of satisfied demand travelling by public transport. It is lowest in South at 3.9% of all satisfied demand travelling by public transport. The average for London is 5.1% of satisfied demand being by public transport.

- In terms of retained demand (defined as demand for sports halls from within a borough and met at sports halls in that borough), the lowest level of retained demand is in Central sub-region at 79.3% of satisfied demand being from within Central.
- The highest level of retained demand is in East sub-region with 93.9% of the East satisfied demand being from within the borough. East does have the highest number of sports halls sites across London at 149 sites, which is over a third of the total London sites at 34.2% of the total London supply.
- As Central has the lowest level of retained demand it follows it is the sub-region which exports most of its demand for sports halls and 20.7% of the Central sub-region satisfied demand for sports halls is met outside the sub-region.
- It also follows that the East sub-region is the sub-region which exports least of its demand for sports halls and only 6.1% of the East sub-region satisfied demand for sports halls is met outside the sub-region.

Unmet demand

Table 5 - Unmet Demand	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total number of visits in the peak, not currently being met	70622	23921	17828	5201	10188	13483
Unmet demand as a % of total demand	17.5	31.5	13.9	11.7	12.5	18.4
Equivalent in Courts - with comfort factor	435.94	147.66	110.05	32.11	62.89	83.23
% of Unmet Demand due to Lack of Capacity -	60.2	75.3	52.3	53.4	54.1	51.4
Outside Catchment	39.8	24.7	47.7	46.6	45.9	48.6
Outside Catchment;	39.8	24.7	47.7	46.6	45.9	48.6
% Unmet demand who do not have access to a car	38.9	24.4	46.8	45.1	44.4	47.3
% of Unmet demand who have access to a car	0.9	0.3	0.9	1.5	1.5	1.3
Lack of Capacity;	60.2	75.3	52.3	53.4	54.1	51.4
% Unmet demand who do not have access to a car	36.6	38.3	42.6	43.1	30.2	27.9
% of Unmet demand who have access to a car	23.7	37	9.7	10.3	23.9	23.5

Commentary on Unmet Demand

- Given the earlier comments on total demand for sports hall visits being greater than total supply and the negative supply/demand balance across all 5 Sub-regions, it is not surprising to find there is quite a reasonably high level of unmet demand. Across the 5 Sub-regions unmet demand for sports halls is 70,622 visits and this is 17.5% of the total demand for sports halls across London.
- Unmet demand at this level equates to 435 badminton courts, with the comfort factor added in and for context there are 2,263 badminton courts in the projected 2021 London wide supply of sports halls.
- Unmet demand is highest, not surprisingly, in Central sub-region at 23,921 visits, some 31.5% of the total unmet demand for sports halls across London. This equates to 147 badminton courts and there is projected to be a total supply of 228 badminton courts in the Central sub-region in 2021. So the projected unmet demand is a very high proportion of the supply of sports halls in Central in 2021.
- Again unsurprisingly, given the earlier findings, the lowest unmet demand for sports halls is in the North sub-region at 5,201 visits, some 11.7% of the total unmet demand for sports halls across London. This equates to 32 badminton courts and there is projected to be a supply of 191 badminton courts in the North sub-region in 2021.
- There are two types of unmet demand (1) where a sports hall cannot absorb all of the demand within its catchment area and there are no other sports halls within the catchment area of where the demand is to absorb it. (2) Where demand is located outside the catchment area of a facility and this is usually demand located outside the 20 minutes/1 mile walk to catchment area and this is predominated by demand which does not have access to a car.
- There are both types of unmet demand across London and in each Sub-region. Some 60.2% of the total unmet demand for sports halls across London is due to lack of capacity and 39.8% is due to demand being outside the catchment area of a sports hall.
- The lowest levels of unmet demand due to lack of capacity is in the West sub-region at 51.4% of the total unmet demand in the West sub-region.
- The highest level of unmet demand due to lack of capacity is in the Central sub-region – for all the reasons set out earlier - and this is 75.3% of the Central sub-region total unmet demand.
- The highest and lowest levels of unmet demand being outside a catchment area of a facility are the reverse of the lack of capacity findings – both in the areas and the percentages.

Used Capacity

Table 6 - Used Capacity	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Total number of visits used of current capacity	332146	46092	111794	38401	77371	58488
% of overall capacity of halls used	91.4	99.5	88.8	98.9	84.1	96.6
% of visits made to halls by walkers	24.3	45.8	26.4	20.9	16.8	15.6
% of visits made to halls by road	75.7	54.2	73.6	79.1	83.2	84.4
Visits Imported; Number of visits imported As a % of used capacity	8271	4817	8547	3980	12215	6132
	2.5	10.5	7.6	10.4	15.8	10.5
Visits Retained: Number of Visits retained As a % of used capacity	323875	41276	103247	34421	65155	52356
	97.5	89.6	92.4	89.6	84.2	89.5

Commentary on Used Capacity.

- Used capacity is a measure of how full the sports halls are. Sports halls are regarded as being close to full when they are at 80% of their theoretical capacity. The reason for setting the sports halls at this 80% level is because above this level sports halls become crowded and uncomfortably full and it limits the operation of the sports hall in terms of changing the programming of activities and circulation by users. The 80% level is referred to as the comfort level or factor.
- For London wide the estimate is that the level of sports hall capacity used is at 91.4%. The lowest percentage for used capacity is in the South sub-region but this is still a very high 84.1% of total sports hall capacity. The highest is in Central and the halls are effectively at 100% of all sports hall capacity estimated to be used by in 2021. These findings are consistent with the earlier comments on total demand being greater than total supply and the scale of the negative supply/demand balance across all 5 Sub-regions.
- As set out in the covering report to the Sub-region findings, the reasons for used capacity being high are because of the significant changes on the demand side. The sequence is that the London wide total population is projected to increase from 7,737,892 people in 2010 to 8,346, 806 by 2021. This is an increase of 608,914 people.
- The knock on impact on this population increase in terms of demand for sports halls, is that total demand for sports halls is projected to increase from 380,543 visits in the weekly peak period in 2010 to 402,759 visits in the same weekly peak period in 2021. This is a weekly peak period increase of 22,216 visits across London.
- In terms of the percentage of used capacity which is imported (defined as the demand for sports halls where the nearest sports hall for that demand is located in another authority) this is only 8,271 visits or 2.5% of the total used capacity for sports halls across London. In effect, the London average is that some 97.5% of the total used capacity for sports halls originates and is met in the same Sub-region.
- The South sub-region has the lowest percentage of used capacity which is retained at 84.2% and the highest is in the East sub-region at 92.4%.

Relative Share

Table 7 - Relative Share	LONDON	Central sub-region	East sub-region	North sub-region	South sub-region	West sub-region
Score - with 100 = GLA share	75	52	88	69	87	71
+/- from GLA share	-25	-49	-12	-31	-13	-29

Commentary on Relative Share

In addition to the supply and demand analyses reported on so far, there is also a relative share analysis. Relative share provides a different view point in that it looks at the share of the opportunity for people to use facilities, taking into account the number of users within the local area, and the size and availability of sports halls within the catchment of the users of these halls. A simple description of relative share is to consider sports hall provision as a cake, its size being proportionate to the facility's capacity, i.e., the number of sports halls and the number of hours available for use.

The relative share analysis divides the 'capacity cake' amongst the number of users who are within catchment of the sports hall provision. The figures used within relative share analysis calculated at output level, and aggregated to 1km squares within the maps. These figures are compared to the London relative share level which is set at 100. When looking at the Relative Share maps this means that anywhere in the local area which has a value above 100 has a greater relative share than the London wide level (i.e. residents of that area have a greater opportunity to use sports halls than the London average). In turn, any area with a value below 100 has a lower relative share than the London wide level and therefore the residents of that area have less opportunity to use sports halls than the London average. This helps to identify areas which require intervention to improve access for residents to sports halls at a local and borough wide level.

- Three Sub-regions have a minus value and therefore have a relative share and access to sports halls which is below the London wide norm. These range from the lowest in Central at – 31, to the closest to the London wide norm but still below it in the West sub-region where it is – 6 of the London norm. The other Sub-region with a minus value is in the North at – 8.
- The other 2 Sub-regions have a relative share value which is above the London wide norm and residents in these sub-regions have a greater relative share of sports halls than the London norm. The South sub-region has a value of +16, whilst the East sub-region has the highest value at +18.
- The location with the highest and lowest relative share are set out in each of the Sub-region reports.

Summary of Main Findings

Total Supply

- The London population varies significantly across the five Sub-regions and this will be a very major influence on the overall findings across all seven categories of analyses. This has to be said explicitly. The level of population variation means the five sub-regions are not directly comparable. The range is from an estimated population in 2021 in the East sub-region of 2,639,428 people to 930,765 people in the North sub-region.
- Across London in the 5 Sub-regions there are 436 sports halls SITES. There are a total of 603 individual main HALLS (minimum 3 badminton court size).
- 149 sites out of the total 436 London supply of sports halls sites are in the East Sub-region. So the East sub-region has 34.2% of the total London supply of sports hall sites, there are 10 boroughs in the East sub-region.
- 106 of the total London supply of sports halls are in the South sub-region, which is 24.3% of the total London supply of sports halls. There are 6 boroughs in the South sub-region.
- The lowest number of sports hall sites is in the North sub-region with 10.8% of the total London supply, some 47 sports halls across the three boroughs in the North.
- Across London there are 10 commercial sports halls sites out of the supply of 436 sites. The distribution of these sites is, 1 site each in Southwark, Finchley, Enfield, Bromley, Richmond, Sutton, Harrow and Hillingdon and 2 sites in Hounslow. (Note: the analysis has a cut off size for inclusion in the supply listing at 3 badminton courts or above. There are no doubt sports halls smaller than this in London and possibly these are commercial sites as part of indoor health and fitness centres but these are not included in the analysis because they do not provide for the full range of indoor hall sports).
- Based on the comparator standard of number of courts per 10,000 population, there is a London wide average is 2.7 badminton courts per 10,000 population. The highest standard of provision is in South sub-region at 3.2 badminton courts per 10,000 population and the lowest is in Central at 2 badminton courts per 10,000 population. West sub-region is the other sub-region below the London average at 2.3 badminton courts per 10,000 population.

Total Demand

- East sub-region has the highest total resident demand for sports halls at 127,824 visits per week in the weekly peak period, which is 31.7% of the total London demand of 402,759 visits for sports halls. So the East sub-region has 34.2% of the total London Sub-region supply of sports hall sites and 31.7% of the total London demand.

- The South sub-region has the second highest total demand for sports halls at 81,612 visits, which is 20.3% of the total London demand for sports halls. The South sub-region has 24.3% of the total London supply of sports halls.
- So the East and South sub-regions combined have over half at 52% of the total London wide demand for sports halls, there are 16 boroughs in these two sub-regions.
- The lowest demand for sports halls is in the North sub-region where its three boroughs generate a total demand for 44,283 visits, which is 11% of the total London wide demand for sports halls.
- Access to sports halls is by three travel modes – car, public transport and walk to. The dominate travel modes are car and walk to and the London wide percentages for travel by each mode are: 71% of all visits to sports halls by car, 5% by public transport and 24% by walking.
- The catchments areas for these two travel modes are very different – 20 minutes DRIVE time by car and the same 20 minutes but 1 MILE by walking. To ensure accessibility to sports halls the locations need to benefit as many people as possible within the dominate travel modes and the percentage of the population who do/do not have access to a car very much influences the travel mode to sports halls.
- The London wide percentage of the population who do not have access to a car is 29.1% of the population. This varies quite considerably across the Sub-regions, with 46.1% of the population in the Central sub-region without access to a car; 30.7% on East sub-region; 24.9% in the North sub-region; 20.6% in the South sub-region and 23.5% in the West sub-region.
- In short, these percentages should mean a higher percentage of travel to sports halls by car in South sub-region and a consequent high accessibility to sports halls because it is 20 minutes drive time. Whilst in Central it will be a much lower percentage of visits by car and a high percentage of travel in the walk to catchment – based on a 1 mile catchment area. So in Central a need for a network of local centres in order for them to be accessible.

Supply/Demand Balance

- The London population in 2021 is projected to generate a demand for 2,486 badminton courts (taking account of the comfort factor that a sports hall is comfortably full when it reaches 80% of its total capacity).
- The total capacity or supply across London is 1,795 badminton courts, available for community use courts (taking account of the comfort factor)
- So across London total demand exceeds total supply by some 691 badminton courts - there is a negative supply/demand balance.

- All five Sub-regions have a negative supply/demand balance. The sub-region with the highest negative supply/demand balance is Central with 240 badminton courts, across the 7 boroughs in the Central sub-region.
- The next highest negative balance is in East (which has the highest population of the 5 Sub-regions in 2021 at a projected 2,639,428 people) with 167 badminton courts (10 boroughs).
- West is next with a negative supply/demand balance of 152 badminton courts (6 boroughs).
- North has a negative supply/demand balance of 82 badminton courts (3 boroughs)
- Whilst South has the least negative supply/demand balance at 50 badminton courts (7 boroughs)

Satisfied Demand

- As there is an overall negative supply/demand balance for sports halls of 691 badminton courts in 2021 across London, this finding is reflected in the level of satisfied demand. The level of total demand which is satisfied demand is 82.5%, the England wide percentage is 90.2% of total demand being satisfied demand.
- Given the lowest negative supply/demand balance is in the South sub-region, it has the highest level of satisfied demand at 87.5% of total demand.
- For the same reasons of the negative supply/demand balance, the lowest satisfied demand level is in Central sub-region at 68.5% of total demand being satisfied demand.
- Across London the percentage of satisfied demand which travels to sports halls by car is 70.7%, with 24.3% travelling on foot and 5.1% by public transport.
- Satisfied demand by car travel is highest in the West sub-region at 80.5% of all satisfied demand being by car travel. The West sub-region has the second lowest percentage of the population who do not have access to a car at 23.5% of the West sub-region population (London wide average is 29.1% of the London population)
- Central has a much lower percentage of car travel to sports halls at 49.9% of all satisfied demand being by car travel. The walk to travel pattern is much higher than the London average at 42.3% of all satisfied demand by walking. In the Central sub-region, 46.1% of the population who do not have access to a car. Given this finding, the walk to pools is going to be very high and based on a 20 minutes/1 mile walk to catchment this means there is a requirement for a network of local accessible pools to ensure the residents can access sports halls.

- Satisfied demand by public transport is low in every sub-region. The highest percentage is in Central at 7.8% of satisfied demand by public transport. It is lowest in South at 3.9%, whilst the average for London is 5.1% of satisfied demand being by public transport.
- In terms of retained demand (defined as demand for sports halls from within a borough and met at sports halls in that borough), the lowest level of retained demand is in Central sub-region at 79.3% of satisfied demand being from within Central.
- The highest level of retained demand is in East sub-region with 93.9% of the East satisfied demand being from within the sub-region. East does have the highest number of sports halls sites across London at 149 sites, which is 34.1% of the total London supply.
- As Central has the lowest level of retained demand it follows it is the sub-region which exports most of its demand for sports halls and 20.7% of the Central sub-region satisfied demand for sports halls is met outside the sub-region.
- It also follows that the East sub-region is the sub-region which exports least of its demand for sports halls and only 6.1% of the East sub-region satisfied demand for sports halls is met outside the sub-region.

Unmet demand

- The impact of total demand for sports hall visits being greater than total supply and the negative supply/demand balance across all 5 Sub-regions, leads to a quite high level of unmet demand. Across the 5 Sub-regions unmet demand for sports halls is 70,622 visits and this is 17.5% of the total demand for sports halls across London.
- Unmet demand at this level equates to 436 badminton courts, with the comfort factor added in. For context there are 2,263 badminton courts in the projected 2021 London wide supply of sports halls.
- Unmet demand is highest, not surprisingly, in Central sub-region at 23,921 visits, 31.5% of the total unmet demand for sports halls across London. This equates to 147 badminton courts and there is projected to be a total supply of 228 badminton courts in the Central sub-region in 2021. So the projected unmet demand is a very high proportion of the supply of sports halls in Central in 2021.
- The lowest unmet demand for sports halls is in the North sub-region at 5,201 visits, 11.7% of the total unmet demand for sports halls across London. This equates to 32 badminton courts and there is projected to be a supply of 191 badminton courts in the North sub-region in 2021.
- There are two types of unmet demand (1) where a sports hall cannot absorb all of the demand within its catchment area and there are no other sports halls within the catchment area of where the demand is to absorb it. (2) Where demand is located outside the catchment area of a facility and this is usually demand located outside the 20 minutes/1 mile walk to catchment area and this is predominated by demand which does not have access to a car.

- There are both types of unmet demand across London and in each Sub-region. Some 60.2% of the total unmet demand for sports halls across London is due to lack of capacity and 39.8% is due to demand being outside the catchment area of a sports hall
- The lowest levels of unmet demand due to lack of capacity is in the West sub-region at 51.4% of the total unmet demand.
- The highest level of unmet demand due to lack of capacity is in the Central sub-region – for all the reasons set out earlier - and this is 75.3% of the Central sub-region total unmet demand.
- The highest and lowest levels of unmet demand being outside a catchment area of a facility are the reverse of the lack of capacity findings – both in the sub-regions and the percentages.

Used Capacity

- Used capacity is a measure of how full the sports halls are. Sports halls are regarded as being close to full when they are at 80% of their theoretical capacity. The reason for setting the sports halls at this 80% level is because above this level sports halls become crowded and uncomfortably full and it limits the operation of the sports hall in terms of changing the programming of activities and circulation by users. The 80% level is referred to as the comfort level or factor.
- For London wide the estimate is that the level of sports hall capacity used is at 91.4%.
- The lowest percentage for used capacity is in the South sub-region at 84.1% of total sports hall capacity. The highest is in Central and the halls are effectively at 100% of all sports hall capacity estimated to be used by in 2021. These findings are consistent with the earlier comments on total demand being greater than total supply and the scale of the negative supply/demand balance across all 5 Sub-regions.
- The reasons for used capacity being high are because of the significant changes on the demand side. The sequence is that the London wide total population is projected to increase from 7,737,892 people in 2010 to 8,346,806 by 2021. This is an increase of 608,914 people
- The knock on impact on this population increase in terms of demand for sports halls, is that total demand for sports halls is projected to increase from 380,543 visits in the weekly peak period in 2010 to 402,759 visits in the same weekly peak period in 2021. This is a weekly peak period increase of 22,216 visits across London.
- In terms of the percentage of used capacity which is imported (defined as the demand for sports halls where the nearest sports hall for that demand is located in another authority) this is 2.5% of the total used capacity for sports halls across London. In effect, the London average is that some 97.5% of the total used capacity for sports halls originates and is met in the same Sub-region.

- The South sub-region has the lowest percentage of used capacity which is retained at 84.2% and the highest is in the East sub-region at 92.4%.

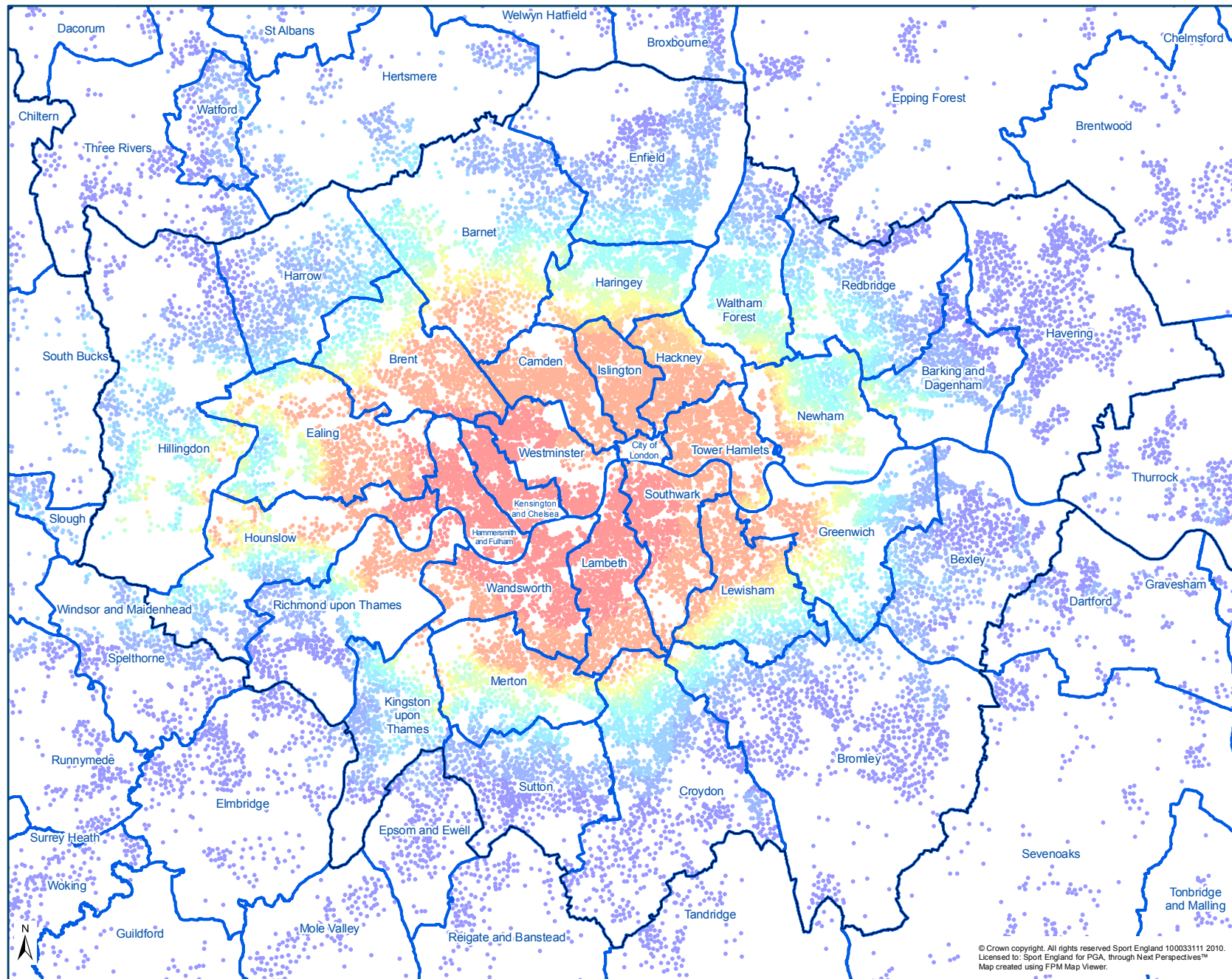
Relative Share

- Three Sub-regions have a relative share and access to sports halls which is below the London wide norm. These range from the lowest in Central at – 31, to the closest to the London wide norm but still below it in the West sub-region where it is – 6 of the London norm. The other Sub-region with a minus value is in the North at – 8.
- The other 2 Sub-regions have a relative share value which is above the London wide norm and residents in these areas have a greater relative share of sports halls than the London norm. The South sub-region has a value of +16, whilst the East sub-region has the highest value at +18.

Facility Planning Model - Halls 2021 Aggregated Unmet Demand Run. London overview.

Aggregated Unmet Demand expressed as units of badminton courts (rounded to one decimal place). GLA population projections for 2021 with known facility commitments as at 2013. Data outputs shown thematically (colours) at output area level and also aggregated at 1km square (figure labels).

Legend
Regions
Local Authorities (LA)
Aggregated Unmet Demand OA
OA Pop. Weighted Centroid



Sport England Facilities Planning Model
London Plan London sub regions – Artificial Grass Pitches

Profile of Artificial Grass Pitches as at 2021
London Population as at 2021 with GLA Projections April 2010
Active Places Dataset as at March 2010 including known London commitments

Total Supply

Table 1 - Supply	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Number of pitches	176	18	55	27	40	36
% of Pitches		10.2%	31.3%	15.3%	22.7%	20.5%
Number of pitch sites	158	16	50	24	36	32
% of pitch sites		10.1%	31.6%	15.2%	22.8%	20.3%
Supply of total pitches in pitches	176	18	55	27	40	36
Supply of publicly available pitch space in pitches (scaled with hours available in peak period)	138.97	14.65	45.11	18.22	32.55	28.44
Supply of total pitch space in visits per week in peak period	104224	10988	33833	13663	24409	21333
Pitches per 1000 population	0.21	0.12	0.21	0.29	0.23	0.23

Commentary on Total Supply Total Demand

- London has a total supply of 158 Artificial Grass pitch (AGP's) sites. The East sub region which has ten boroughs has the highest number of AGP sites at 50 sites, which is 31.6% of the total London supply of 158 AGP sites. The North sub region surprisingly (because it only has three boroughs) does not have the lowest supply. It has 24 AGP sites, whilst the Central sub region has 16 sites and 10.1% of the London supply of AGP's.
- Within these 158 AGP sites, there are a total of 176 individual AGP pitches across London.
- Central sub region which has seven boroughs has the lowest supply of AGP sites at 16 in total and which is 10.1% of the total London supply of AGP's.
- A more standardised way of comparing supply is based on the comparator of pitches per 10,000 population. The London wide average is 0.21 pitches per 10,000 population. The standard is highest in the North sub region at 0.29 pitches per 10,000 population. It is lowest in Central at 0.12 pitches per 10,000 population.
- Of the 158 AGP sites in London some 151 sites are public and 7 sites are commercial AGP's. The commercial sites are located in Central (Southwark); East (Greenwich which has 3 commercial sites); South (Wandsworth) and West (Harrow and Hillingdon one each).
- All areas have double pitch sites but there are very few - Central has 2 double pitch sites; East has 5 double sites; North has 3 double pitch sites; South has 4 and West has 4 as well.

Total Demand

Table 2 - Demand	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Population	8346806	1508575	2639428	930765	1723474	1544563
Visits demanded – visits per week in peak period	202073	36477	65745	22460	40436	36955
Equivalent in pitches	269.43	48.64	87.66	29.95	53.91	49.27
% of population without access to a car	29.1	46.1	30.7	24.9	20.6	23.5

Commentary on Total Demand

- The East sub region has the highest projected population in 2021 at 2,639,428 people. It also not surprisingly has the highest total demand for AGP's at 65,745 visits at peak times. This is 32.5% of the total London demand for AGP's, which are 202,073 visits per week in the weekly peak period.
- The North sub region has the lowest projected population in 2021 at 930,765 people. It also has the lowest projected demand for AGP's at 22,460 visits, which is 11.1% of the total London demand for AGP's, projected for 2021.
- The London wide average for access to a car is 29.1%. The range across the five Sub-regions is considerable, with a very high 46.1% of the Central sub region not having access to a car, whilst in the South sub region it is 20.6% of the population without access to a car.
- The significance of this finding is not in car access itself, but in the percentage of the population who travel to AGP's by different travel modes. Areas which have a high car access population have a wider choice and accessibility to AGP's because the drive time catchment area is 20 minutes drive time. However in areas such as Central with 46.1% of the population not having access to a car and 30.7% in East, then the walk to catchment is going to be a significant catchment area for much of the demand. The walk to catchment is based on a 20 minute walking catchment and so the need in these areas is for a network of local and more accessible pitches for a large part of the population without access to a car.
- Across London it is estimated 77% of all visits to AGP's are by car, 3% only by public transport and 20% by walking. The public transport travel pattern to AGP's is very low indeed and does not differ significantly in areas with the biggest network of public transport, such as Central.

Supply Demand Balance

Table 3 - Supply/Demand Balance	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Supply Pitch provision (pitches) scaled to take account of hours available for community use	138.97	14.65	45.11	18.22	32.55	28.44
Demand Pitch provision (pitches) taking into account a 'comfort' factor	269.43	48.64	87.66	29.95	53.91	49.27
Supply / Demand balance Variation in pitches of provision available compared to the minimum required to meet demand.	-130.46	-33.99	-42.55	-11.73	-21.36	-20.83

Commentary on Supply Demand Balance

- Across the five Sub-regions the resident population in 2021 is projected to generate a demand for just over 269 pitches. This total demand compares with a total capacity or supply across the five Sub-regions of 139 pitches, available for community use.
- This means that total demand exceeds total supply by just over 130 pitches. In effect, the deficit between projected demand in 2021 and projected supply in 2021 is nearly the same as the provision of AGP pitches in 2013. Put another way the projected shortfall in demand and supply is 94% of the AGP supply in 2013. (Note: it is not proposed that this gap in supply and demand is met by this scale of provision because future provision will depend on the objectives of the local authorities as the main providers. It is setting out the scale of the gap in supply and demand).
- All five Sub-regions have an excess of demand over supply so there is a negative supply/demand balance. The highest is in East sub region at 42 pitches. The lowest is in the North sub region, but is still a deficit of nearly 12 pitches across the three boroughs in the North sub region.

Satisfied Demand

Table 4 - Satisfied Demand	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Total number of visits which are met	113482	15082	37425	13724	24659	22592
% of total demand satisfied	56.2	41.3	56.9	61.1	61	61.1
% of demand satisfied who travelled by car	78.6	70.9	76.5	79.5	82.6	82.2
% of demand satisfied who travelled by foot	18.9	25.6	20.7	18.4	15.4	15.5
% of demand satisfied who travelled by public transport	2.6	3.5	2.9	2.1	2	2.3
Demand Retained	99368	8666	29621	9921	18498	16565
Demand Retained - as a % of Satisfied Demand	87.6	57.5	79.1	72.3	75	73.3
Demand Exported	14114	6416	7803	3803	6161	6027
Demand Exported - as a % of Satisfied Demand	12.4	42.5	20.8	27.7	25	26.7

Commentary on Satisfied Demand

- Given the findings on supply and demand balance it is not a surprise to find that across London and in each of the Sub-regions there is a low level of satisfied demand. At the London wide level it is 56.2% of total demand for AGP's is satisfied demand. This means that 56.2% of the total demand for AGP's across London is within the catchment area of an AGP and there is sufficient capacity at the site(s) to absorb the demand.
- The highest level of satisfied demand is in three of the Sub-regions, these being North, South and West where satisfied demand is 61% of total demand. It is lowest in the Central sub region at 41.3% of total demand being satisfied demand and in the East sub region it is 56.9% which is satisfied demand.
- The level of satisfied demand which travels to AGP's by car is 78.6% across London and therefore is the dominant travel mode. The lowest percentage of visits to AGP's by car travel is in the Central sub region, but is still a high 70.9% of all visits to AGP's by car. It is highest in the South sub region at 82.6%, where there is also only around 20% of the South sub region population who do not have access to a car.
- The fact that car travel is the dominate travel mode means the main catchment area for the majority of AGP's is a 20 minute drive time, which creates high accessibility. However this situation linked with satisfied demand being low means that the low level of satisfied demand is caused by lack of capacity/supply of AGP's sites. It is not caused by demand being located outside the catchment area of AGP's because as stated, there is high accessibility to pitches based on the majority of travel to them is by car and over a 20 minute drive time.
- Some 18.9% of all the satisfied demand for AGP's across London is by walking. This is highest in the Central sub region at 25.6% of all visits to AGP's and in Central some 46.1% of the population do not have access to a car. It is lowest in the South sub region where 15.4% of all satisfied demand for AGP's is in the 20 minutes/1 mile walk to catchment area.
- Of the satisfied demand for AGP's which is retained demand (defined as demand for AGP's which is met by pitches in the same borough), this is highest in the East sub region at 79.1% of total satisfied demand. East has the highest number of AGP sites at 50 sites and is therefore well placed to retain a high level of satisfied demand from its residents within the Sub-region.
- Retained demand is lowest in Central sub region where 57.5% of the total Central sub region satisfied demand for AGP's is retained at the 16 AGP sites in the Central sub region.
- The reverse position to retained demand is exported demand, where demand originates in one area and is met at an AGP in another area. Central obviously exports most of its satisfied demand at 42.5% of the Central sub region satisfied demand being exported. East exports the lowest level of satisfied demand from its residents at 20.8% of the total East sub region satisfied demand.

Unmet Demand

Table 5 - Unmet Demand	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Total number of visits in the peak period not currently being met	88592	21395	28321	8736	15777	14363
Unmet demand as a % of total demand	43.8	58.7	43.1	38.9	39	38.9
Equivalent in pitches - with comfort factor	118.12	28.53	37.76	11.65	21.04	19.15
% of Unmet Demand due to ;						
Lack of Capacity	96.4	96.0	96.4	96.9	96.7	96.0
Outside Catchment	3.6	4.0	3.6	3.1	3.3	4.0
Outside Catchment	3.6	4.0	3.6	3.1	3.3	4.0
% Unmet demand who do not have access to a car	1.9	2.7	2	1.4	1.4	2
% of Unmet demand who have access to a car	1.7	1.3	1.6	1.7	1.9	2
Lack of Capacity	96.4	96.0	96.4	96.9	96.7	96.0
% Unmet demand who do not have access to a car	26.8	33.5	28.1	23.5	20.7	23.2
% of Unmet demand who have access to a car	69.5	62.6	68.4	73.4	76.0	72.7

Commentary on Unmet Demand

- Across London the level of unmet demand equates to 43.8% of total demand for AGP's. This level of unmet demand equates to around 118 AGP's as individual pitches and there are projected to be 176 AGP's in 2013. So the level of unmet demand projected to exist in 2021 is 67% of the committed supply of AGP's in 2013. It is a very high level of unmet demand. (Note: again this reference is for setting the context for the level of unmet demand in scale of AGP's it is not suggesting this number of pitches needs to be provided)
- The lowest level of unmet demand is across three Sub-regions, these being North, South and West at 38.9%, 39% and 38.9% of total demand respectively. However the number of pitches required to meet this unmet demand does differ across the three areas. In North it is over 12 pitches, in South it is 21 pitches and in the West sub region it is just over 19 pitches. Again a considerable level of provision required to meet the unmet demand totals.
- There are two types of unmet demand (1) where an AGP cannot absorb all of the demand within its catchment and there are no other AGP's within the catchment area of where the demand is to absorb it. (2) Where demand is located outside the catchment area of a facility and this is usually demand located outside the 20 minutes/1 mile walk to catchment area.
- Both types apply across the sub-regions. However for reasons set out under the negative supply and demand balance the overwhelming unmet demand is down to lack of pitch capacity. This represents some 96.4% of total unmet demand across London. There is virtually no variation from this average across the five Sub-regions.
- In terms of strategic planning and selecting priority locations or hot spots for future provision, this scale of unmet demand is suggesting that it does not have to be a sophisticated process and locational planning is not the issue. It is the need to provide more pitches to meet demand – virtually everywhere.
- Unmet demand because it is located outside the catchment area of an existing AGP is the remaining 3.6% of unmet demand; again it varies little across the five Sub-regions.
- The locations of greatest unmet demand for AGP's are set out in each of the five Sub-region reports.

Used Capacity

Table 6 - Used Capacity	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Total number of visits used of current capacity	104224	10988	33833	13663	24409	21333
% of overall capacity of pitches used	100	100	100	100	100	100
% of visits made to pitches by walkers	20.5	33.1	22.7	19.1	16.2	16.5
% of visits made to pitches by road	79.5	66.9	77.3	80.9	83.8	83.5
Visits Imported						
Number of visits imported	4856	2321	4211	3742	5911	4767
As a % of used capacity	4.7	21.1	12.4	27.4	24.2	22.3
Visits Retained						
Number of Visits retained	99368	8666	29621	9921	18498	16565
As a % of used capacity	95.3	78.9	87.6	72.6	75.8	77.7

Commentary on Used Capacity

- Used capacity is a measure of how full the AGP's are. The single most important finding in this whole report is that for London and all the five Sub-regions the estimate is that the level of AGP capacity used is 100%.
- In effect, the estimate is that by 2021 (and most likely well before) and based on the projected changes in the London population and new AGP commitments up to 2013, all 158 AGP sites and 176 pitches across London will be full. There is no variation in this finding in any geographical area. In short the culmination of all the findings under the various supply and demand headings come together in the estimate of used capacity and that the AGP pitches are full – everywhere.
- In terms of strategic planning and identifying priority locations for new provision then it is simple process of simply providing more pitches and relative priorities and locations are not the issues. As the second row of the used capacity table shows all the five Sub-regions are projecting used capacity for AGP sites and pitches to be at 100%. There is no one single priority area for future provision.
- On some more minor findings on used capacity there are an estimated 20.5% of used capacity of AGP's by walkers and 79.5% by car travellers across London.
- The walk to used capacity is highest in Central sub region at 33.1% of all used capacity. It is lowest in the South at 16.2 of all used capacity being by walkers.
- Car travel based on a 20 minute drive time for the majority of users is the dominate travel mode for used capacity. It is highest in South at 83.8% of all used capacity at AGP's being by car travel; it is lowest in Central at 66.9% (but still a high percentage) of used capacity of AGP's is by car travel.

Relative share

Table 7 - Relative Share	LONDON	Central sub region	East sub region	North sub region	South sub region	West sub region
Score - with 100 = national share	73	51	73	77	84	80
+/- from National share	-27	-49	-27	-23	-16	-21
Score - with 100 =GLA share	100	70	100	106	115	109
+/- from GLA share	0	-30	0	6	15	9

Commentary on Relative Share

In addition to the supply and demand analyses reported on so far, there is also a relative share analysis. Relative share provides a different view point in that it looks at the share of the opportunity for people to use facilities, taking into account the number of users within the local area, and the size and availability of AGP's within the catchment of the users of these pitches. A simple description of relative share is to consider AGP provision as a cake, its size being proportionate to the facility's capacity, i.e., the number of AGP's and the number of hours available for use.

The relative share analysis divides the 'capacity cake' amongst the number of users who are within catchment of the pitch provision. The figures used within relative share analysis calculated at output level, and aggregated to 1km squares within the maps. These figures are compared to the London relative share level which is set at 100. When looking at the Relative Share maps this means that anywhere in the local area which has a value above 100 has a greater relative share than the London wide level (i.e. residents of that area have a greater opportunity to use AGP's than the London average). In turn, any area with a value below 100 has a lower relative share than the London wide level and therefore the residents of that area have less opportunity to use AGP's than the London average. This helps to identify areas which require intervention to improve access for residents to AGP's at a local and borough wide level.

- Three of the Sub-regions have a positive relative share which is above the London wide norm of 100; these are North at +6, to the London wide norm of 100, South at +15 and West at +9. One Sub-region, which is East, is the same as the London norm of 100 and Central is below the London norm of 100 at -30.

Summary of Main Findings

Total Supply

- The London population varies significantly across the five Sub-regions and this will be a very major influence on the overall findings across all seven categories of analyses. This has to be said explicitly. The level of population variation means the five sub-regions are not directly comparable. The range is from an estimated population in 2021 in the East sub region of 2,639,428 people to 930,765 people in the North sub region.
- London has a total supply of 158 Artificial Grass pitch (AGP's) sites. The East sub region which has ten boroughs has the highest number of AGP sites at 50 sites, which is 31.6% of the total London supply of 158 AGP sites.
- Within these 158 AGP sites, there are a total of 176 individual AGP pitches across London.
- Central sub region which has seven boroughs has the lowest supply of AGP sites at 16 in total and which is 10.1% of the total London supply of AGP's.
- Of the 158 AGP sites in London some 151 sites are public and 7 sites are commercial AGP's. The commercial sites are located in Central (Southwark); East (Greenwich which has 3 commercial sites); South (Wandsworth) and West (Harrow and Hillingdon one each).
- All areas have double pitch sites but there are very few - Central has 2 double pitch sites; East has 5 double sites; North has 3 double pitch sites; South has 4 and West has 4.

Total Demand

- Across London the total demand for AGP's is 202,073 visits in the weekly peak period. The East sub region has the highest projected total demand for AGP's at peak times. This is 32.5% of the total London demand for AGP's. The East sub region does have 10 boroughs within it so the level of demand is proportionate to its size.
- The North sub region has the lowest projected demand for AGP's at 22,460 visits, which is 11.1% of the total London demand for AGP's, projected for 2021. The North sub region only has three boroughs, so again its level of demand is proportionate to its size.
- The London wide average for access to a car is 29.1%. The range across the five Sub-regions is wide, with a very high 46.1% of the Central sub region not having access to a car, whilst in the South sub region it is 20.6% of the population without access to a car.

- The significance of this finding is not in car access itself, but in the percentage of the population who travel to AGP's by different travel modes. Areas which have a high car access population have a wider choice and accessibility to AGP's because the drive time catchment area is 20 minutes drive time. However in areas such as Central with 46.1% of the population not having access to a car and 30.7% in East, then the walk to catchment is going to be a significant catchment area for much of the demand. The walk to catchment is based on a 20 minute walking catchment and so the need in these areas is for a network of local and more accessible pitches for a large part of the population without access to a car.
- Across London it is estimated 77% of all visits to AGP's are by car, 3% by public transport and 20% by walking.

Supply Demand Balance

- Across London the five Sub-regions are projected to generate a demand for just over 269 pitches by 2021.
- This total demand compares with a London total capacity, or, supply across the five Sub-regions of 139 pitches, available for community use.
- This means that total demand exceeds total supply by just over 130 pitches. In effect, the deficit between projected demand in 2021 and projected supply in 2021 is nearly the same as the provision of AGP pitches in 2013.
- Put another way the projected shortfall in demand and supply is 94% of the AGP supply in 2013. (Note: it is not proposed that this gap in supply and demand is met by this scale of provision because future provision will depend on the objectives of the local authorities as the main providers. It is setting out the scale of the gap in supply and demand).
- All five Sub-regions have an excess of demand over supply so there is a negative supply/demand balance across London. The highest is in East sub region at 42 pitches. The lowest is in the North sub region, but is still a deficit of nearly 12 pitches across the three boroughs in the North sub region.

Satisfied Demand

- At the London wide level 56.2% of total demand for AGP's is satisfied demand. This means that 56.2% of the total demand for AGP's across London is within the catchment area of an AGP and there is sufficient capacity at the site(s) to absorb the demand.
- The highest level of satisfied demand is in three of the Sub-regions, these being North, South and West where satisfied demand is 61% of total demand. It is lowest in the Central sub region at 41.3% of total demand being satisfied demand.

- The level of satisfied demand which travels to AGP's by car is 78.6% across London and therefore is the dominant travel mode. The lowest percentage of visits to AGP's by car travel is in the Central sub region, but is still a high 70.9% of all visits to AGP's by car.
- Some 18.9% of all the satisfied demand for AGP's across London is by walking. This is highest in the Central sub region at 25.6% of all visits to AGP's and in Central some 46.1% of the population do not have access to a car. It is lowest in the South sub region where 15.4% of all satisfied demand for AGP's is in the 20 minutes/1 mile walk to catchment area.

Unmet Demand

- Across London the level of unmet demand equates to 43.8% of total demand for AGP's. This level of unmet demand equates to around 118 AGP's as individual pitches and there are projected to be 176 AGP's in 2013. (Note: again this reference is for setting the context for the level of unmet demand in scale of AGP's it is not suggesting this number of pitches needs to be provided)
- The lowest level of unmet demand is across three Sub-regions, these being North, South and West at 38.9%, 39% and 38.9% of total demand respectively. However the number of pitches required to meet this unmet demand does differ across the three areas. In North it is over 12 pitches, in South it is 21 pitches and in the West sub region it is just over 19 pitches.
- There are two types of unmet demand (1) where an AGP cannot absorb all of the demand within its catchment and there are no other AGP's within the catchment area of where the demand is to absorb it. (2) Where demand is located outside the catchment area of a facility and this is usually demand located outside the 20 minutes/1 mile walk to catchment area. The overwhelming unmet demand is down to lack of pitch capacity. This represents some 96.4% of total unmet demand across London.
- The locations of greatest unmet demand for AGP's are set out in each of the five Sub-region reports.

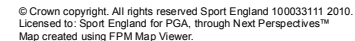
Used Capacity

- Used capacity is a measure of how full the AGP's are. The single most important finding in this report is that for London and all the five Sub-regions the estimate is that the level of AGP capacity used is 100%.
- In effect, the estimate is that by 2021 (and most likely well before) and based on the projected changes in the London population and new AGP commitments up to 2013, the 158 AGP sites across London will be full. In short the culmination of all the findings under the various supply and demand headings come together in the estimate of used capacity and that the AGP pitches are full.
- On some more minor findings on used capacity there are an estimated 20.5% of used capacity of AGP's by walkers and 79.5% by car travellers across London.

- Car travel based on a 20 minute drive time for the majority of users is the dominate travel mode for used capacity. It is highest in South at 83.8% of all used capacity at AGP's being by car travel; it is lowest in Central at 66.9% (but still a high percentage) of used capacity of AGP's is by car travel.

Relative Share

- Three of the Sub-regions have a positive relative share which is above the London wide norm of 100; these are North at +6, to the London wide norm of 100, South at +15 and West at +9. One Sub-region, which is East, is the same as the London norm of 100 and Central is below the London norm of 100 at -30.



Sport England Facilities Planning Model – Model Description and Model Parameters

Included within this appendix are the following:

- Model description
- Facility Inclusion Criteria
- Model Parameters

Model Description

Background

The Facilities Planning Model (FPM) is a computer-based supply/demand model, which has been developed by Edinburgh University in conjunction with sportscotland and Sport England since the 1980s. The model is a tool to help to assess the strategic provision of community sports facilities in an area. It is currently applicable for use in assessing the provision of sports halls, swimming pools, indoor bowls centres and synthetic turf pitches.

Use of FPM

Sport England uses the FPM as one of its principal tools in helping to assess the strategic need for certain community sports facilities. The FPM has been developed as a means of:

- assessing requirements for different types of community sports facilities on a local, regional or national scale;
- helping local authorities to determine an adequate level of sports facility provision to meet their local needs;
- helping to identify strategic gaps in the provision of sports facilities; and
- comparing alternative options for planned provision, taking account of changes in demand and supply. This includes testing the impact of opening, relocating and closing facilities, and the likely impact of population changes on the needs for sports facilities.

Its current use is limited to those sports facility types for which Sport England holds substantial demand data, i.e. swimming pools, sports halls, indoor bowls and synthetic turf pitches.

The FPM has been used in the assessment of Lottery funding bids for community facilities, and as a principal planning tool to assist local authorities in planning for the provision of community sports facilities. For example, the FPM was used to help assess the impact of a 50m

swimming pool development in the London Borough of Hillingdon. The Council invested £22 million in the sports and leisure complex around this pool and received funding of £2,025,000 from the London Development Agency and £1,500,000 from Sport England¹.

How the model works

In its simplest form, the model seeks to assess whether the capacity of existing facilities for a particular sport is capable of meeting local demand for that sport, taking into account how far people are prepared to travel to such a facility.

In order to do this, the model compares the number of facilities (supply) within an area, against the demand for that facility (demand) that the local population will produce, similar to other social gravity models.

To do this, the FPM works by converting both demand (in terms of people), and supply (facilities), into a single comparable unit. This unit is 'visits per week in the peak period' (VPWPP). Once converted, demand and supply can be compared.

The FPM uses a set of parameters to define how facilities are used and by whom. These parameters are primarily derived from a combination of data including actual user surveys from a range of sites across the country in areas of good supply, together with participation survey data. These surveys provide core information on the profile of users, such as, the age and gender of users, how often they visit, the distance travelled, duration of stay, and on the facilities themselves, such as, programming, peak times of use, and capacity of facilities.

This survey information is combined with other sources of data to provide a set of model parameters for each facility type. The original core user data for halls and pools comes from the National Halls and Pools survey undertaken in 1996. This data formed the basis for the National Benchmarking Service(NBS). For STP's, the core data used comes from the user survey of STP's carried out in 2005/6 jointly with sportscotland.

User survey data from the NBS, and other appropriate sources are used to update the models parameters on a regular basis. The parameters are set out at the end of the document. and the range of the main source data used by the mode includes;

- National Halls & Pools survey data –Sport England
- Benchmarking Service User Survey data –Sport England
- UK 2000 Time Use Survey - ONS
- General Household Survey - ONS
- Scottish Omnibus Surveys – Sport Scotland
- Active People Survey - Sport England
- STP User Survey - Sport England & sportscotland
- Football participation - The FA
- Young People & Sport in England – Sport
- Hockey Fixture data - Fixtures Live

¹ Award made in 2007/08 year.

Calculating Demand

This is calculated by applying the user information from the parameters, as referred to above, to the population². This produces the number of visits for that facility that will be demanded by the population. Depending on the age and gender make up of the population, this will affect the number of visits an area will generate. In order to reflect the different population make up of the country, the FPM calculates demand based on the smallest census groupings. These are Output Areas (OA)³. The use of OA's in the calculation of demand ensures that the FPM is able to reflect and portray differences in demand in areas at the most sensitive level based on available census information. Each OA used is given a demand value in VPWPP by the FPM.

Calculating Supply Capacity

A facility's capacity varies depending on its size (i.e. size of pool, hall, pitch number), and how many hours the facility is available for use by the community. The FPM calculates a facility's capacity by applying each of the capacity factors taken from the model parameters, such as the assumptions made as to how many 'visits' can be accommodated by the particular facility at any one time. Each facility is then given a capacity figure in VPWPP.(see parameters in section C)

Based on travel time information⁴ taken from the user survey, the FPM then calculates how much demand would be met by the particular facility having regard to its capacity and how much demand is within the facility's catchment. The FPM includes an important feature of spatial interaction. This feature takes account of the location and capacity of all the facilities, having regard to their location and the size of demand and assesses whether the facilities are in the right place to meet the demand.

It is important to note that the FPM does not simply add up the total demand within an area, and compare that to the total supply within the same area. This approach would not take account of the spatial aspect of supply against demand in a particular area. For example, if an area had a total demand for 5 facilities, and there were currently 6 facilities within the area, it would be too simplistic to conclude that there was an over supply of 1 facility, as this approach would not take account of whether the 5 facilities are in the correct location for local people to use them within that area. It might be that all the facilities were in one part of the borough, leaving other areas under provided. An assessment of this kind would not reflect the true picture of provision. The FPM is able to assess supply and demand within an area based on the needs of the population within that area.

In making calculations as to supply and demand, visits made to sports facilities are not artificially restricted or calculated by reference to administrative boundaries, such as local authority areas. Users are generally expected to use their closest facility. The FPM reflects this through analysing the location of demand against the location of facilities, allowing for cross boundary movement of visits. For example, if a

² For example, it is estimated that 10.45% of 16-24 year old males will demand to use a STP, 1.69 times a week. This calculation is done separately for the 12 age/gender groupings.

³ Census Output Areas (OA) is the smallest grouping of census population data, and provides the population information on which the FPM's demand parameters are applied. A demand figure can then be calculated for each OA based on the population profile. There are over 175,400 OA's across England. An OA has a target value of 125 people per OA.

⁴ To reflect the fact that as distance to a facility increases, fewer visits are made, the FPM uses a travel time distance decay curve, where the majority of users travel up to 20 minutes. The FPM also takes account of the road network when calculating travel times. Car ownership levels, taken from Census data, are also taken into account when calculating how people will travel to facilities.

facility is on the boundary of a local authority, users will generally be expected to come from the population living close to the facility, but who may be in an adjoining authority

Facility Attractiveness – for halls and pools only

Not all facilities are the same and users will find certain facilities more attractive to use than others. The model attempts to reflect this by introducing an attractiveness weighting factor, which effects the way visits are distributed between facilities. Attractiveness however, is very subjective. Currently weightings are only used for hall and pool modelling, with a similar approach for STP's is being developed.

Attractiveness weightings are based on the following:

1. Age/refurbishment weighting – pools & halls - the older a facility is, the less attractive it will be to users. It is recognised that this is a general assumption and that there may be examples where older facilities are more attractive than newly built ones due to excellent local management, programming and sports development. Additionally, the date of any significant refurbishment is also included within the weighting factor; however, the attractiveness is set lower than a new build of the same year. It is assumed that a refurbishment that is older than 20 years will have a minimal impact on the facilities attractiveness. The information on year built/refurbished is taken from Active Places. A graduated curve is used to allocate the attractiveness weighting by year. This curve levels off at around 1920 with a 20% weighting. The refurbishment weighting is slightly lower than the new built year equivalent.
2. Management & ownership weighting – halls only - due to the large number of halls being provided by the education sector, an assumption is made that in general, these halls will not provide as balanced a program than halls run by LA's, trusts, etc, with school halls more likely to be used by teams and groups through block booking. A less balanced programme is assumed to be less attractive to a general, pay & play user, than a standard local authority leisure centre sports hall, with a wider range of activities on offer.

To reflect this, two weightings curves are used for education and non-education halls, a high weighted curve, and a lower weighted curve;

- High weighted curve - includes Non education management - better balanced programme, more attractive.
 - Lower weighted curve - includes Educational owned & managed halls, less attractive.
3. Commercial facilities – halls and pools - whilst there are relatively few sports halls provided by the commercial sector, an additional weighing factor is incorporated within the model to reflect the cost element often associated with commercial facilities. For each population output area the Indices of Multiple Deprivation (IMD) score is used to limit whether people will use commercial facilities. The assumption is that the higher the IMD score (less affluence) the less likely the population of the OA would choose to go to a commercial facility.

Inclusion Criteria used within analysis

Swimming Pools

The following inclusion criteria were used for this analysis;

- Include all Operational Indoor Pools available for community use i.e. pay and play, membership, Sports Club/Community Association
- Exclude all pools not available for community use i.e. private use
- Exclude all outdoor pools i.e. Lidos
- Exclude all pools where the main pool is less than 20 meters OR is less than 160 square meters.⁵
- Include all 'planned', 'under construction, and 'temporarily closed' facilities where identified.
- Where opening times are missing, availability has been included based on similar facility types.
- Where the year built is missing assume date 1975⁶.

Facilities in Wales and the Scottish Borders included, as supplied by sportscotland and Sports Council for Wales. All facilities weighted 75% due to no data on age of facilities.

Sports Halls

The following inclusion criteria were used for this analysis;

- Include all Operational Sports Halls available for community use i.e. pay and play, membership, Sports Club/Community Association
- Exclude all Halls not available for community use i.e. private use
- Exclude all Halls where the main hall is less than 3 Courts in size
- Where opening times are missing, availability has been included based on similar facility types.
- Where the year built is missing assume date 1975⁷.

Facilities in Wales and the Scottish Borders included, as supplied by sportscotland and Sports Council for Wales. All facilities weighted 75% due to no data on age of facilities.

Synthetic Turf Pitch

The following inclusion criteria were used for this analysis:

- Include all outdoor, full size STP's with a surface type of sand based, water based or rubber crumb – varied by sport specific runs.
- Include all Operational Pitches available for community use i.e. pay and play, membership, Sports Club/Community Association
- Exclude all Pitches not available for community use i.e. private use
- Minimum pitch dimension taken from Active Places – 75m x45m.

⁵ 160m is equivalent to a 20m x 8m pool. This assumption will exclude very small pools, such as plunge pools and hotel pools.

⁶ Choosing a date in the mid '70s ensures that the facility is included, whilst not overestimating its impact within the run.

⁷ Choosing a date in the mid '70s ensures that the facility is included, whilst not overestimating its impact within the run.

- Non floodlit pitches exclude from midweek evening availability in all runs.
- Excludes all indoor pitches.
- Excludes 5-a-side commercial football centres and small sided 'pens'.
- Excludes MUGA's, redgra, ash, marked out tarmac areas, etc.
- Carpet types included:
 - Combined Run – all carpet types.
 - Hockey Run – all water based weekend/weekday, all sand based weekend only.
 - Football Run – all rubber crumb weekend/weekday, sand based weekday.

Model Parameters used in the Analysis

Swimming Pool Parameters

At one Time Capacity		0.16667 per square metre = 1 person per 6 square meters																															
Catchments		Car: 15 minutes Walking: 1.6 km Public transport: 15 minutes car equivalent NOTE; Catchments use a distance decay function. Times and distances above are indicative.																															
Duration		64 minutes for tanks 68 minutes for leisure pools																															
Participation -% of age band Frequency - VPWPP		<table> <tr> <td></td> <td>0-15</td> <td>16-24</td> <td>25-39</td> <td>40-59</td> <td>60-79</td> </tr> <tr> <td>M</td> <td>13.23</td> <td>10.86</td> <td>13.73</td> <td>8.13</td> <td>3.93</td> </tr> <tr> <td>F</td> <td>12.72</td> <td>14.51</td> <td>18.89</td> <td>10.44</td> <td>4.52</td> </tr> <tr> <td>M</td> <td>0.92</td> <td>0.84</td> <td>0.71</td> <td>0.94</td> <td>1.18</td> </tr> <tr> <td>F</td> <td>0.95</td> <td>0.76</td> <td>0.79</td> <td>0.81</td> <td>1.07</td> </tr> </table>		0-15	16-24	25-39	40-59	60-79	M	13.23	10.86	13.73	8.13	3.93	F	12.72	14.51	18.89	10.44	4.52	M	0.92	0.84	0.71	0.94	1.18	F	0.95	0.76	0.79	0.81	1.07	
	0-15	16-24	25-39	40-59	60-79																												
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M	0.92	0.84	0.71	0.94	1.18																												
F	0.95	0.76	0.79	0.81	1.07																												
Peak Period Percentage of demand in Peak Period		Weekday: 12:00 to 13:30, 16:00 to 22.00 Saturday: 09:00 to 16:00 Sunday: 09:00 to 16:30 Total: 52 Hours 63%																															

At one Time Capacity		20 users per 4-court hall, 8 per 144 sq m of ancillary hall.	
Catchments		Car: 15 minutes Walking: 1.6 km Public transport: 15 minutes car equivalent time NOTE; Catchments use a distance decay function. Times and distances above are indicative.	
Duration		60 minutes	

Participation -% of age band		M	0-15 9.55	16-24 15.04	25-34 14.96	35-44 11.08	45-59 5.68	60-79 5.55	
		F	6.03	9.31	11.66	9.40	5.40	4.28	
Frequency - VPWPP		M	0.85	0.88	0.88	0.90	0.92	1.10	
		F	0.99	0.85	1.03	0.90	1.02	1.27	
Peak Period		Weekday: 17:00 to 22:00 Saturday: 09:30 to 17:30 Sunday: 09:00 to 14:30, 17:00 to 19:30 Total: 40.5 hours 60%							
Percentage of demand in Peak Period									

STP Parameters

	Parameter	Comments
Participation -% of age band	0-15 16-24 25-34 35-44 45-54 55+ Male 3.37 7.72 4.93 2.71 1.26 0.17 Female 3.16 2.70 0.94 0.46 0.18 0.07	
Frequency - VPWPP	0-15 16-24 25-34 35-44 45-54 55+ Male 1.81 1.67 1.27 1.06 1.07 0.97 Female 1.02 1.45 1.34 1.31 1.21 1.32	Football 75.2% Hockey 22.7% Rugby 2.1%
Peak Period	Monday-Thursday = 17.00 – 21.00 Friday = 17.00 – 19.00 Saturday = 9.00 – 17.00 Sunday = 9.00 – 17.00 Total Peak Hours per week = 34 hrs Total number of slots = 26 slots Percentage of demand in peak period = 85%	Mon-Friday = 1 hr slots to reflect mixed use of activities – training, 5/7 a side & Informal matches Weekend = 2 hrs slots to reflect formal matches.
Duration	Monday - Friday = 1 hr Saturday & Sunday = 2 hrs	

At one time capacity	<p>30 players per slot Mon to Fri; 25 players per slot Sat & Sun</p> <p>30 X 18slots = 540 visits</p> <p>25 X 8slots = 200 visits</p> <p>Total = 740 visits per week in the peak period</p>	<p>Saturday and Sunday capacity to reflect dominance of formal 11-side matches i.e. lower capacity</p>
Catchments	<p>82% travelling 20 minutes or less during week – distance decay</p> <p>81% Car borne</p> <p>15% Walk</p> <p>4% Public Transport</p>	